MHC-ZX10

SERVICE MANUAL

UC Model
Canadian Model
AEP Model
UK Model

- MHC-ZX10 is composed of following model.
  As for the service manual, it is issued for each component model,then, please refer to them.

COMPONENT MODEL NAME FOR MHC-ZX10

COMPACT DISC DECK RECEIVER SYSTEM	HCD-ZX10
SPEAKER SYSTEM	SS-ZX10

- Abbreviation

  CND : Canadian model
  G : German model

SPECIFICATIONS

General

Power requirements
North American model: 120 V AC, 60 Hz
European model: 230 V AC, 50/60 Hz

Power consumption
USA model: 190 watts
Canadian model: 195 watts
European model: 200 watts

Dimensions (w/h/d) Approx. 250 x 375 x 395 mm

Supplied accessories: AM loop antenna (1)
FM lead antenna (1)
Remote Commander (1)
Batteries (2)
Speaker cable (2)
Front speaker pads (8)

Design and specifications are subject to change without notice.

PARTS LIST

Part No.	Description	Remark
	ACCESSORIES & PACKING MATERIALS	
	**********	
1-418-862-11	COMMANDER, STANDARD (RM-SR110)	
1-501-374-11	ANTENNA, LOOP	
1-501-659-41	ANTENNA (FM)	
1-769-306-11	CORD, SPEAKER (1.5m)	
4-210-254-11	CUSHION (FOOT) (FRONT SPEAKER)	
4-227-887-11	MANUAL, INSTRUCTION (ENGLISH) (US, CND, AEP, UK, CIS)	
4-227-887-21	MANUAL, INSTRUCTION (FRENCH) (CND)	
4-227-887-31	MANUAL, INSTRUCTION (FRENCH, SPANISH) (AEP)	
4-227-887-41	MANUAL, INSTRUCTION (GERMAN) (AEP, G)	
4-227-887-51	MANUAL, INSTRUCTION (DUTCH, PORTUGUESE, ITALISH) (AEP)	
4-227-887-61	MANUAL, INSTRUCTION (SWEDISH, DANISH, FINNISH) (AED)	
4-991-151-41	COVER, BATTERY (FOR RM-SR110)	

MINI Hi-Fi COMPONENT SYSTEM

SONY®

9-929-228-11

Sony Corporation
Audio Entertainment Group

2000D001668-1
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Published by HA Quality Assurance Dept.

HCD-ZX10

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model

HCD-ZX10 is the tuner, deck, CD and amplifier section in MHC-ZX10.

This stereo system is equipped with the Dolby* B-type noise reduction system.
* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol ⧈ are trademarks of the Dolby Laboratories Licensing Corporation.

CD SECTION	Model Name Using Similar Mechanism	NEW
	CD Mechanism Type	CDM53F-K2BD38
	Base Unit Type	BU-K2BD38
	Optical Pick-up Type	KSM-213DAP/Z-NP
TAPE DECK SECTION	Model Name Using Similar Mechanism	NEW
	Tape Transport Mechanism Type	TCM-230AWR12

SPECIFICATIONS

Amplifier section

AUDIO POWER SPECIFICATIONS: (US model only)

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

with 8 Ω loads both channels driven, from 120–10,000 Hz; rates 110 W per channel minimum RMS power, with no more than 10 % total harmonic distortion from 250 mW to rated output.

Total harmonics distortion Less than 0.07%
(8 Ω at 1 kHz, 60 W)

Canadian model:

Continuous RMS power output (reference)
100 + 100 W
(8 Ω at 1 kHz, 10% THD)
Total harmonics distortion
Less than 0.07%
(8 Ω at 1 kHz, 60 W)

Expect US, Canadian:

DIN power output (rated) 80 + 80 W
(8 Ω at 1 kHz, DIN)
Continuous RMS power output (reference)
100 + 100 W
(8 Ω at 1 kHz, 10% THD)
Music power output (reference)
170 + 170 W
(8 Ω at 1 kHz, 10% THD)

Inputs

VIDEO (AUDIO) IN: (phono jacks)	voltage 250 mV, impedance 47 kΩ
MD IN: (phono jacks)	voltage 450 mV, impedance 47 kΩ

Outputs

MD OUT: (phono jacks)	voltage 250 mV impedance 1 kΩ
PHONES: (stereo mini jack)	accepts headphones of 8 Ω or more
FRONT SPEAKER:	accepts impedance of 8 to 16 Ω
SURROUND SPEAKER:	accepts impedance of 16 Ω
SUPER WOOFER:	Voltage 1 V, impedance 1 kΩ

CD player section

System	Compact disc and digital audio system
Laser	Semiconductor laser (λ=780nm) Emission duration: continuous
Laser output	Max. 44.6 μW* *This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block with 7 mm aperture.
Wavelength	780 – 790 nm
Frequency response	2 Hz – 20 kHz (±0.5 dB)
Signal-to-noise ratio	More than 90 dB
Dynamic range	More than 90 dB

CD OPTICAL DIGITAL OUT
(Square optical connector jack, rear panel)

Wavelength	660 nm
Output Level	–18 dBm

Tape player section

Recording system	4-track 2-channel stereo
Frequency response (DOLBY NR OFF)	40 – 13,000 Hz (±3 dB), using Sony TYPE I cassette 40 – 14,000 Hz (±3 dB), using Sony TYPE II cassette
Wow and flutter	±0.15% W.Peak (IEC) 0.1% W.RMS (NAB) ±0.2% W.Peak (DIN)

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range

US, Canadian models:	87.5 – 108.0 MHz (100 kHz step)
Other models:	87.5 – 108.0 MHz (50 kHz step)
Antenna	FM lead antenna
Antenna terminals	75 Ω unbalanced
Intermediate frequency	10.7 MHz

— Continued on next page —

MINI Hi-Fi COMPONENT SYSTEM

SONY®

AM tuner section

Tuning range
US, Canadian models: 530 – 1,710 kHz (with the interval set at 10 kHz)
531 – 1,710 kHz (with the interval set at 9 kHz)
Except US, Canadian models:
531 – 1,602 kHz (with the interval set at 9 kHz)
Antenna: AM loop antenna
Antenna terminals: External antenna terminal
Intermediate frequency: 450 kHz

General

Power requirements
US, Canadian models: 120 V AC, 60 Hz
Except US, Canadian models:
230 V AC, 50/60 Hz
Power consumption
US model: 190 W
Canadian model: 195 W
European model: 200 W

Dimensions (w/h/d): Approx. 250 x 375 x 395 mm

Mass
US, Canadian models: Approx. 11.5 kg
Except US, Canadian models:
Approx. 11.0 kg

Supplied accessories: AM loop antenna (1)
FM lead antenna (1)
Remote Commander (1)
Batteries (2)
Speaker cords (2)
Front speaker pads (8)

Design and specifications are subject to change without notice.

SAFETY CHECK-OUT

(US model only)

After correcting the original service problem, perform the following safety checks before releasing the set to the customer: Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.

2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

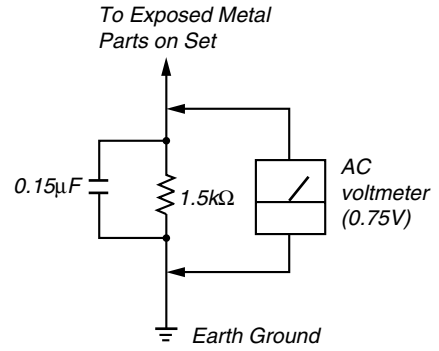


Fig. A. Using an AC voltmeter to check AC leakage.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈSES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPÉMENTS PUBLIÉS PAR SONY.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

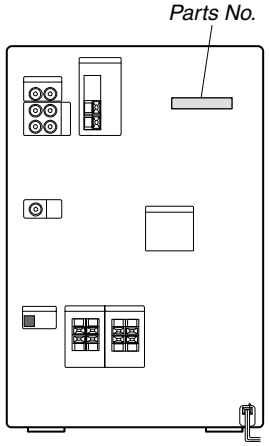
CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Notes on chip component replacement
- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing
- Keep the temperature of soldering iron around 270˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

MODEL IDENTIFICATION

— BACK PANEL —



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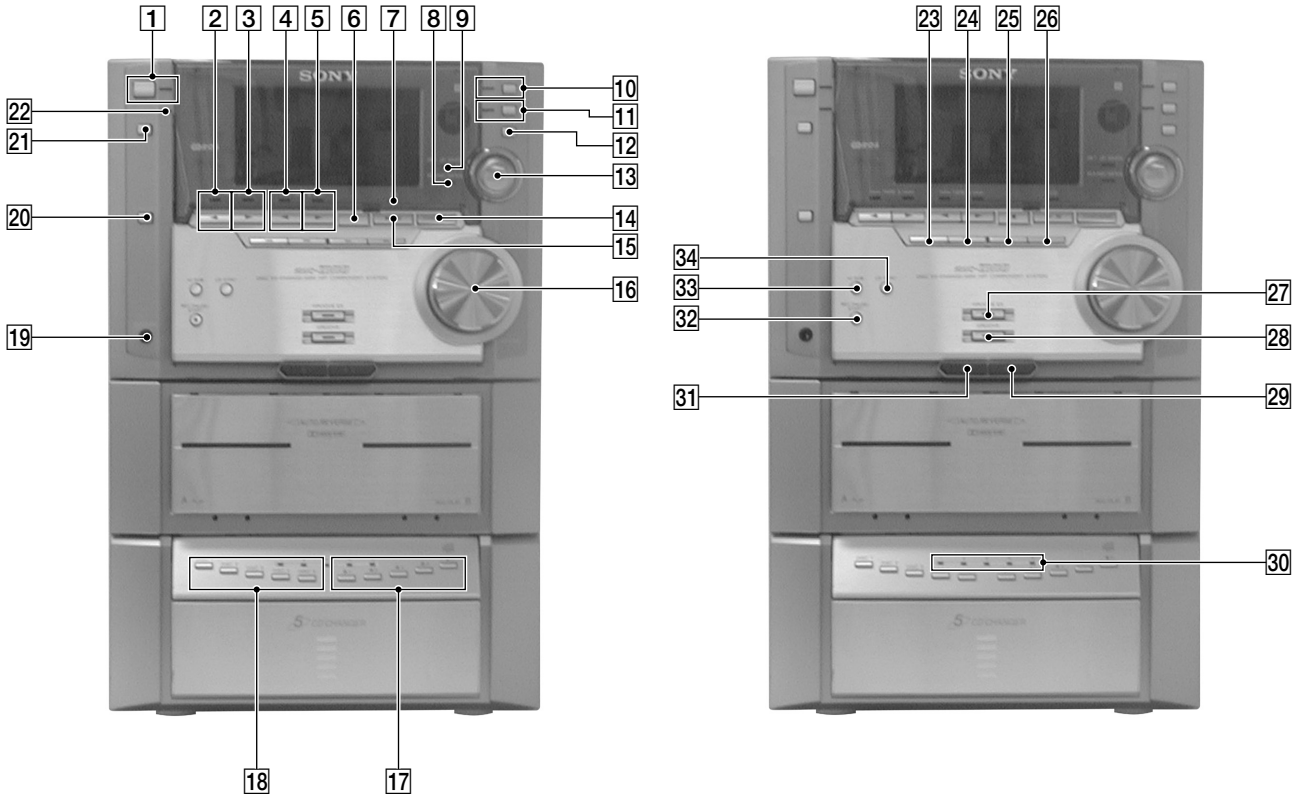
8. ELECTRICAL PARTS LIST 61

MODEL	PARTS No.
US model	4-226-747-0☐
CND model	4-226-747-1☐
AEP, G, AED, UK, CIS models	4-226-747-2☐

- Abbreviation
  CND : Canadian model
  AED : North European model
  G : German model

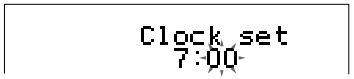
SECTION 1
GENERAL



1 I/⏻ button and indicator
2 TAPE A ◅ button and indicator
3 TAPE A ▻ button and indicator
4 TAPE B ◅ button and indicator
5 TAPE B ▻ button and indicator
6 ■ button
7 CD indicator
8 SOUND MODE indicator
9 SET UP MODE indicator
10 CINEMA SPACE button and indicator
11 V-GROOVE button and indicator
12 MODE SELECT button
13 PUSH ENTER button/Multi stick
14 TUNER/BAND button
15 ▶II button
16 VOLUME knob
17 ⏏ 1 to ⏏ 5 buttons
18 DISC 1 to DISC 5 buttons
19 PHONES jack
20 FUNCTION button
21 DISPLAY button
22 TIMER SELECT indicator
23 I◀◀ button
24 ▶▶I button
25 ◀◀ button
26 ▶▶ button
27 GROOVE EX button
28 GROOVE button
29 TAPE B ⏏ button
30 DISC 1 to DISC 5 indicator
31 TAPE A ⏏ button
32 REC PAUSE/START button
33 HI-DUB button
34 CD SYNC button

3 Move the multi stick toward ▲ or ▼ repeatedly to set the hour.

4 Move the multi stick toward ►.
The minute indication flashes.



5 Move the multi stick toward ▲ or ▼ repeatedly to set the minute.

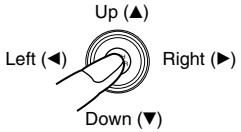
6 Press PUSH ENTER.

To cancel the menu operation

Press MODE SELECT.

Tips

- Refer to the illustration to use the multi stick. Place your finger on the center of the multi stick and move in the direction you want (up/down or left/right shown ▲/▼ or ◄/► in this manual).



- If you've made a mistake, start over from step 1.

To change the time

The previous explanation shows you how to set the time while the power is off. To change the time while the power is on, do the following:

1 Press MODE SELECT repeatedly to select "Set Up Mode", then press PUSH ENTER.
2 Move the multi stick toward ◄ or ► repeatedly to select "Timer Set Up ?", then press PUSH ENTER.
3 Move the multi stick toward ◄ or ► repeatedly to select "Clock Set ?", then press PUSH ENTER.
4 Perform steps 3 through 6 on the left.

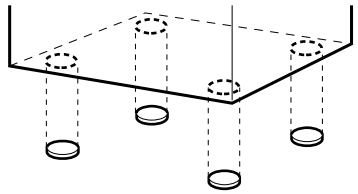
Note

The clock settings are canceled when you disconnect the power cord or if a power failure occurs.

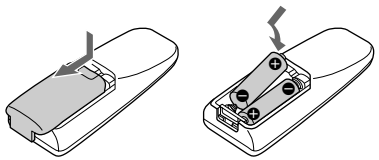
Step 1: Hooking up the system (continued)

To attach the front speaker pads

Attach the supplied front speaker pads to the bottom of the speakers to stabilize the speakers and prevent them from slipping.



Inserting two size AA (R6) batteries into the remote



Tip

With normal use, the batteries should last for about six months. When the remote no longer operates the system, replace both batteries with new ones.

Note

If you do not use the remote for a long period of time, remove the batteries to avoid possible damage from battery leakage.

When carrying this system

Do the following to protect the CD mechanism. Make sure that all discs are removed from the unit.

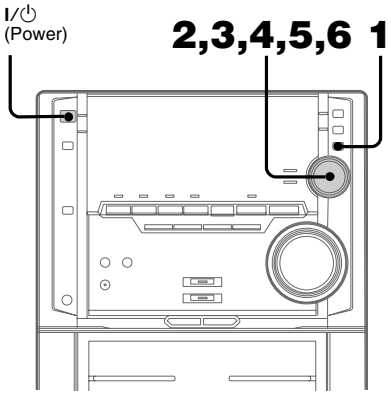
1 Press FUNCTION repeatedly until "CD" appears in the display.
2 Hold down V-GROOVE and press I/⏻ so that "LOCK" appears in the display.

Step 2: Setting the time

You must set the time before using the timer functions.

The clock is on a 24-hour system for the European model, and on a 12-hour system for other models.

For illustration purposes, the 24-hour system model is used.



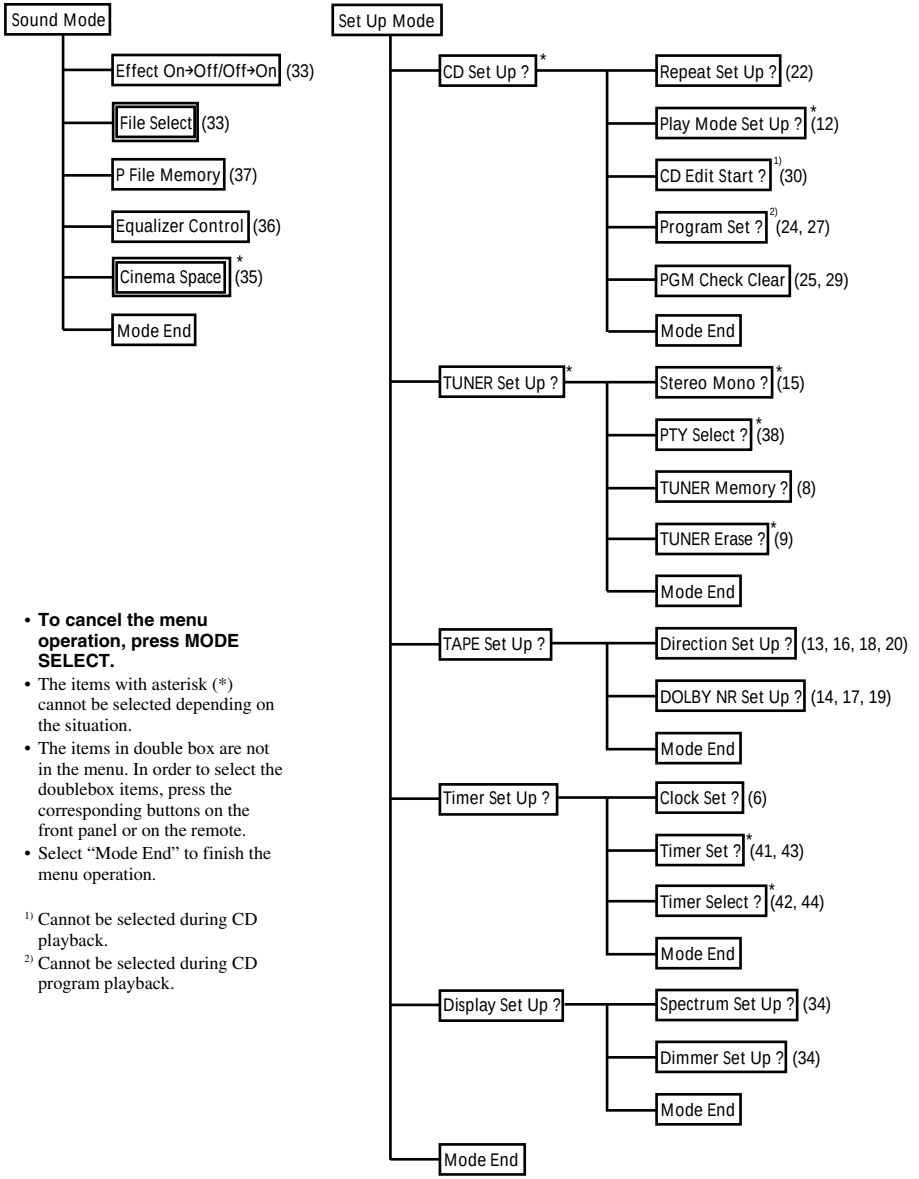
1 Press MODE SELECT when the system is turned off.
"Clock Set ?" appears.
When the system is in the Power Saving Mode, "Clock Set ?" will not appear. Either set Power Saving Mode off, or follow the steps on the following page ("To change the time") after turning the power on.

2 Press PUSH ENTER.
The hour indication flashes.

This section is extracted from instruction manual.

Items in “Sound Mode” and “Set Up Mode”

The numbers in parenthesis denotes the page number for the item.


Sound Mode
Effect On→Off/Off→On (33)
File Select (33)
P File Memory (37)
Equalizer Control (36)
Cinema Space * (35)
Mode End
Set Up Mode
CD Set Up ? *
Repeat Set Up ? (22)
Play Mode Set Up ? * (12)
CD Edit Start ? 1) (30)
Program Set ? 2) (24, 27)
PGM Check Clear (25, 29)
Mode End
TUNER Set Up ? *
Stereo Mono ? * (15)
PTY Select ? * (38)
TUNER Memory ? (8)
TUNER Erase ? * (9)
Mode End
TAPE Set Up ?
Direction Set Up ? (13, 16, 18, 20)
DOLBY NR Set Up ? (14, 17, 19)
Mode End
Timer Set Up ?
Clock Set ? (6)
Timer Set ? * (41, 43)
Timer Select ? * (42, 44)
Mode End
Display Set Up ?
Spectrum Set Up ? (34)
Dimmer Set Up ? (34)
Mode End
Mode End

- **To cancel the menu operation, press MODE SELECT.**
- The items with asterisk (*) cannot be selected depending on the situation.
- The items in double box are not in the menu. In order to select the doublebox items, press the corresponding buttons on the front panel or on the remote.
- Select “Mode End” to finish the menu operation.

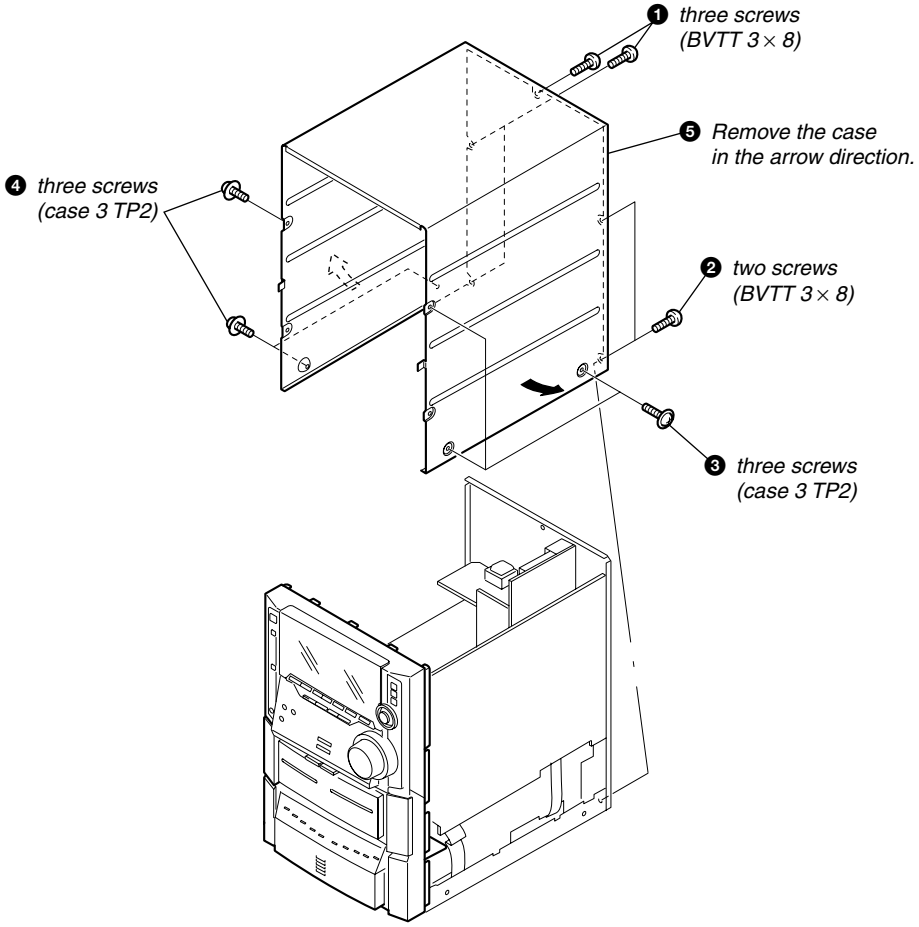
1) Cannot be selected during CD playback.
2) Cannot be selected during CD program playback.

Sony Corporation Printed in Malaysia

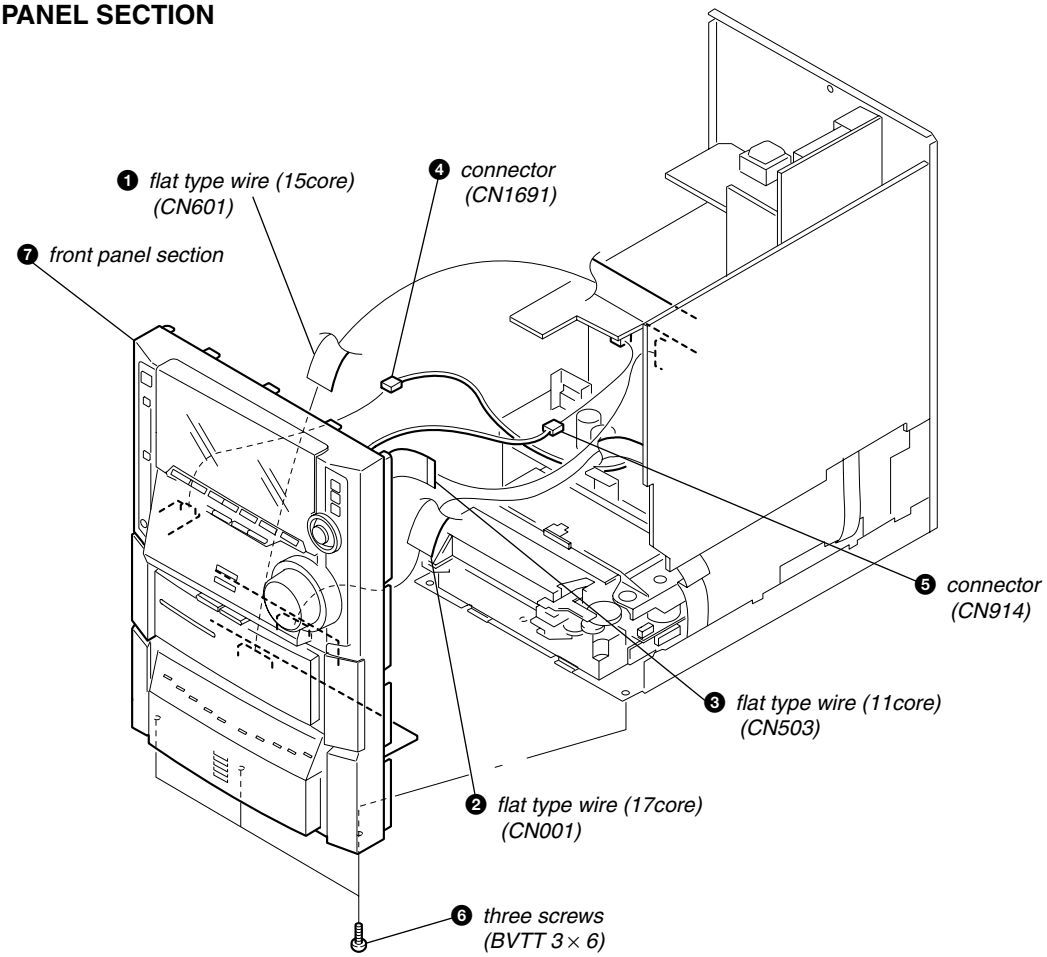
SECTION 2
DISASSEMBLY

Note : Follow the disassembly procedure in the numerical order given.

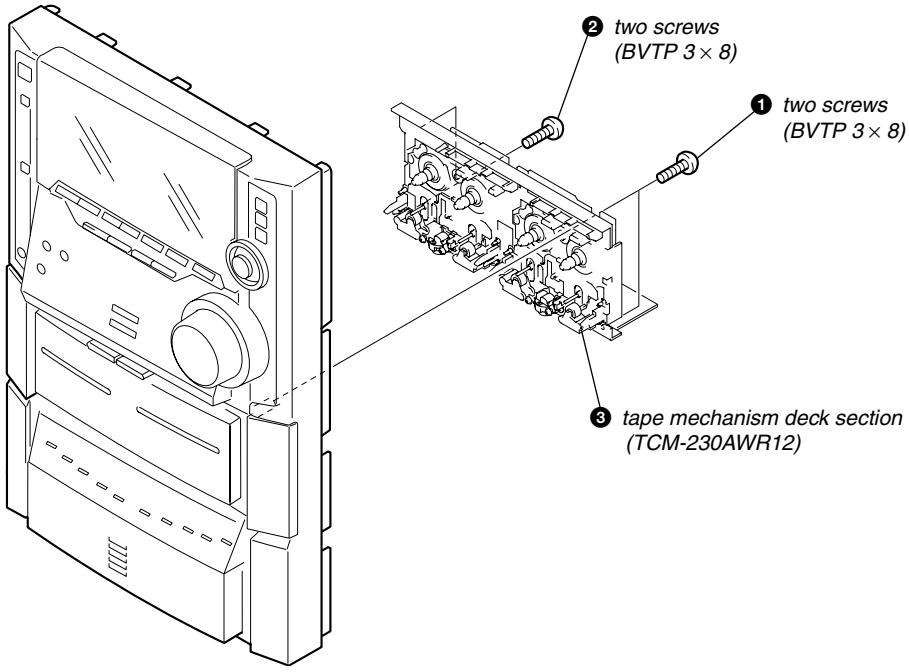
2-1. CASE



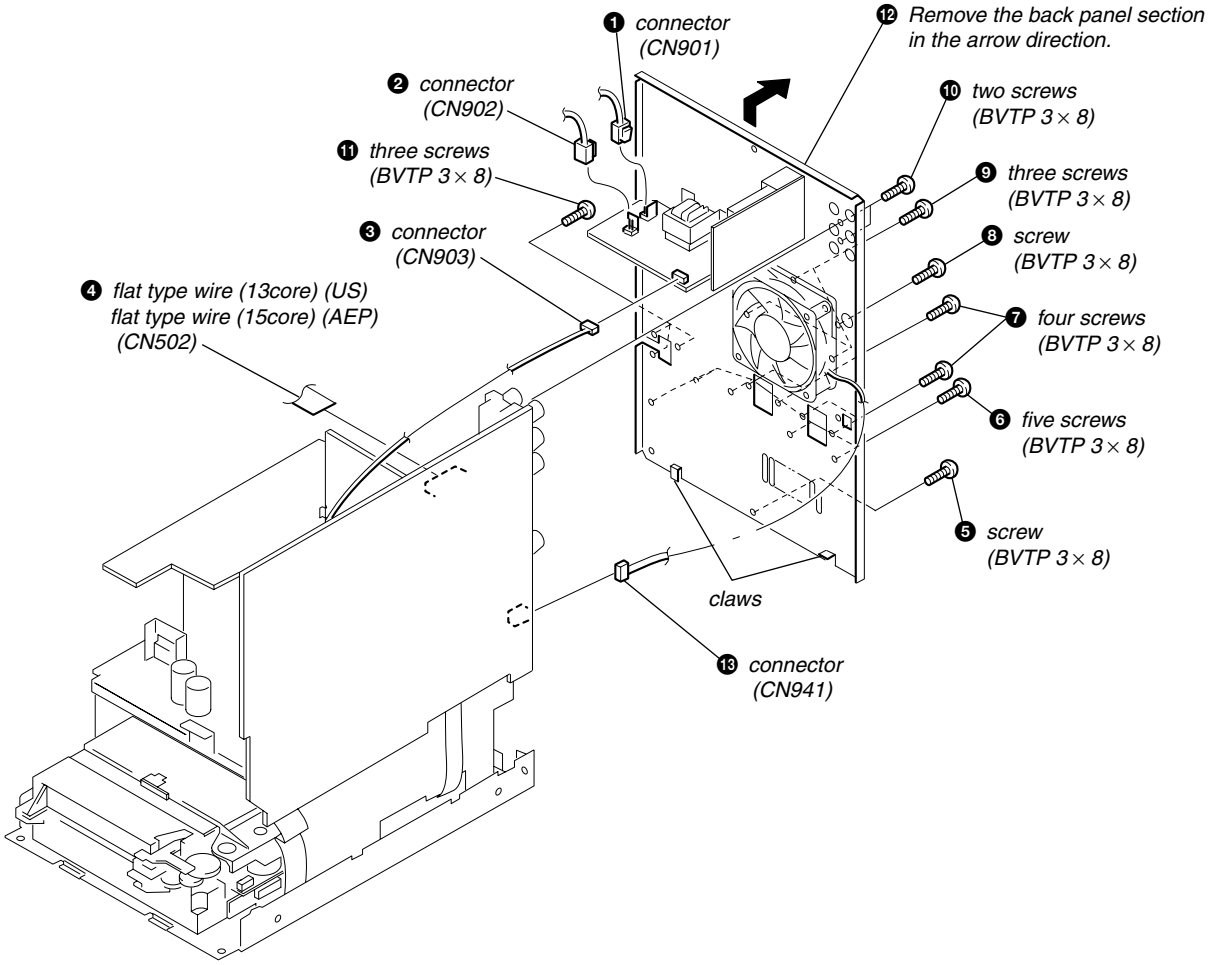
2-2. FRONT PANEL SECTION



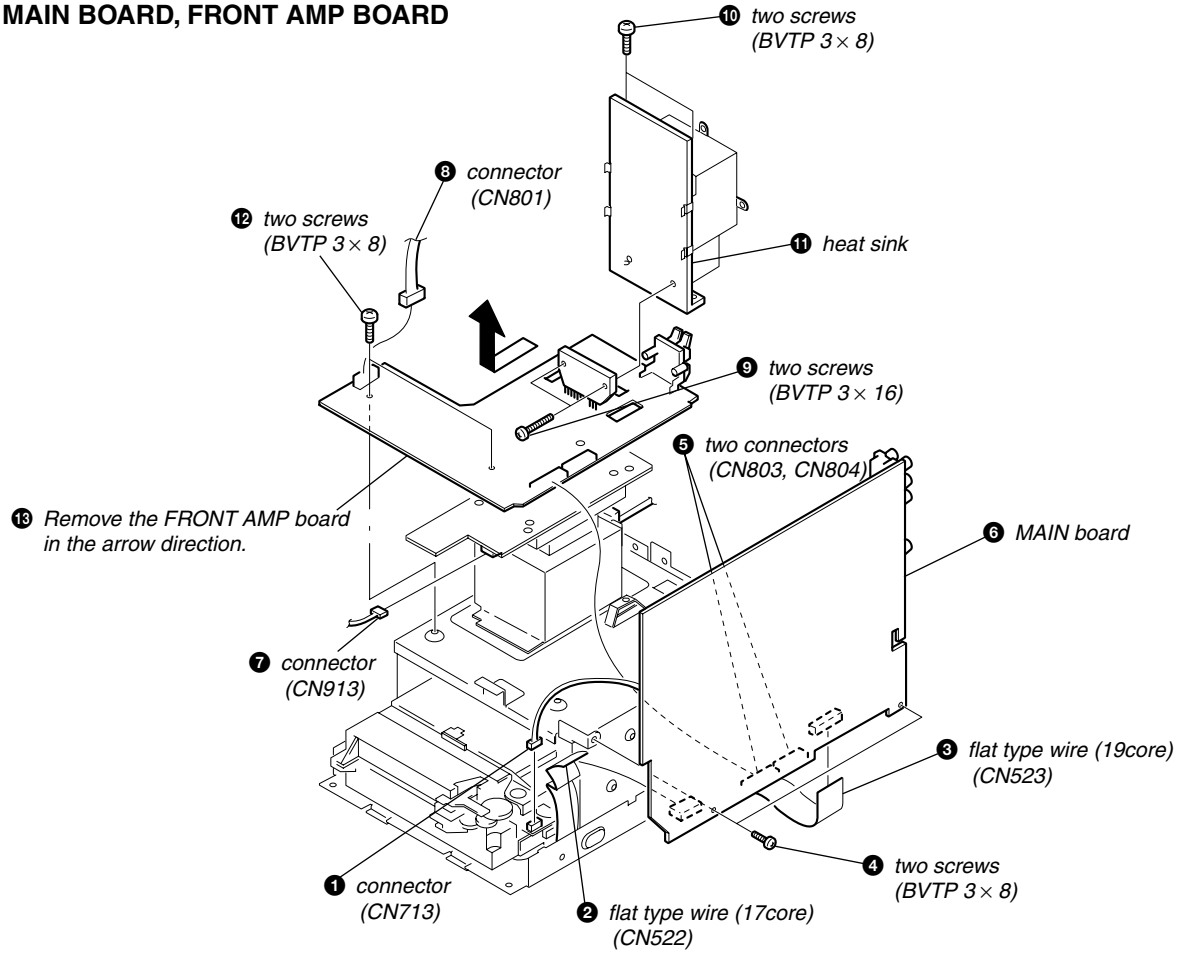
2-3. TAPE MECHANISM DECK SECTION (TCM-230AWR12)



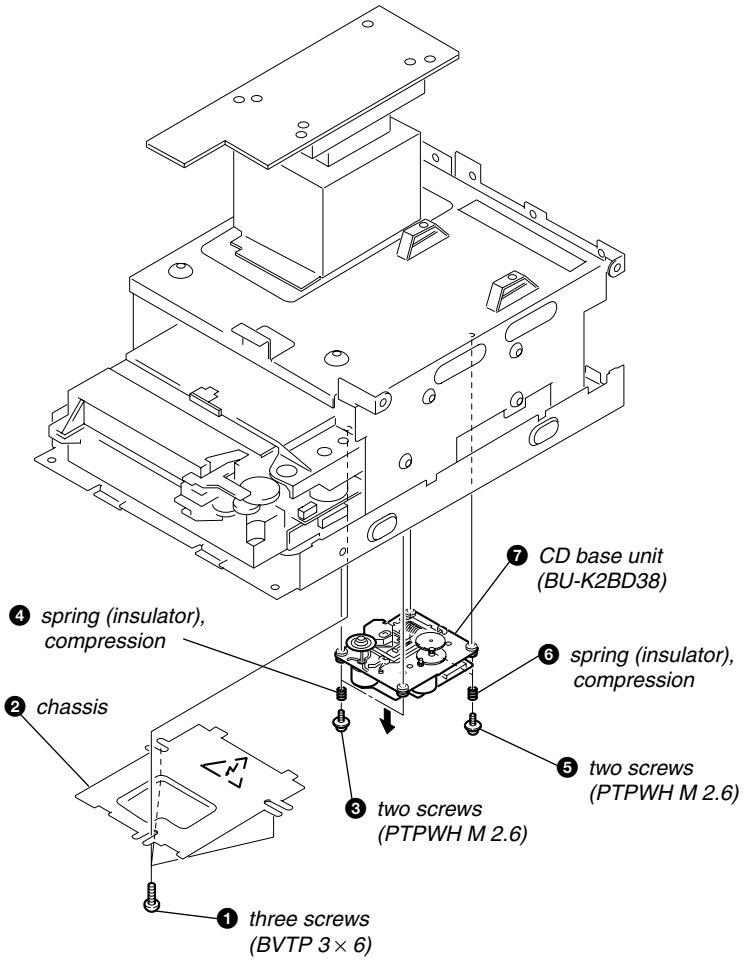
2-4. BACK PANEL SECTION



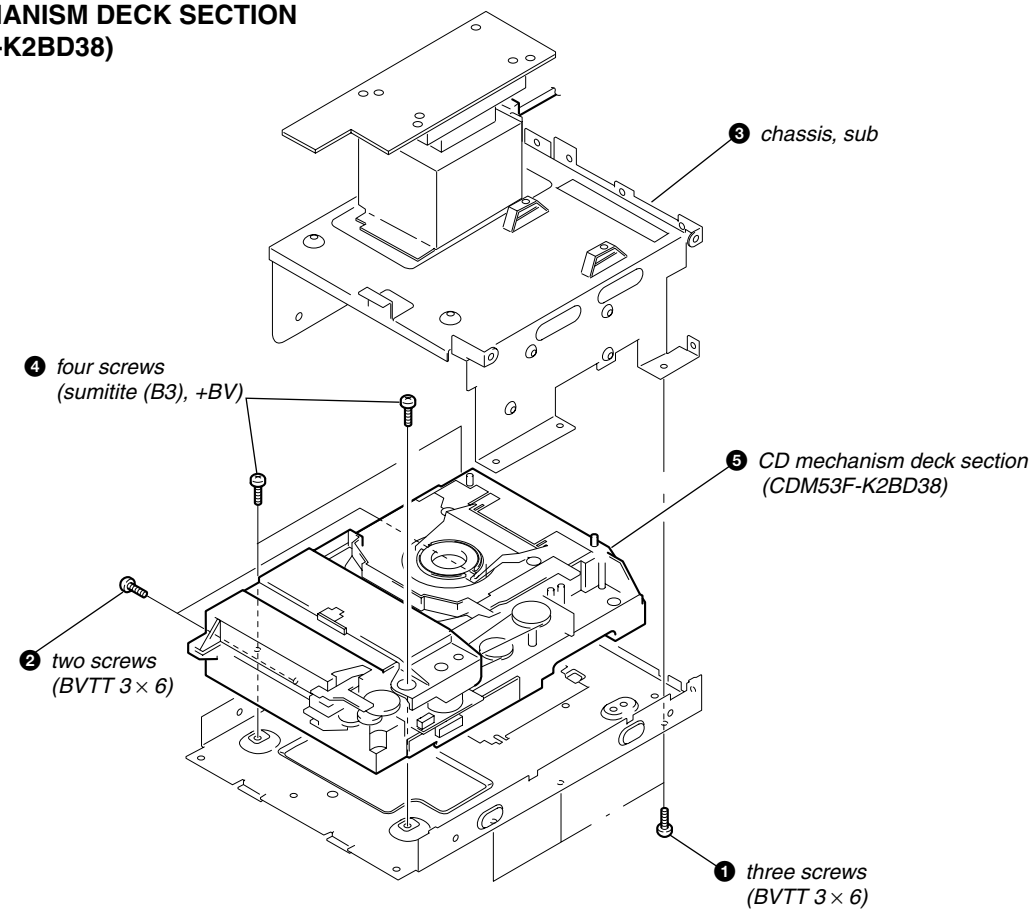
2-5. MAIN BOARD, FRONT AMP BOARD


⑩ two screws (BVTP 3× 8)
⑧ connector (CN801)
⑫ two screws (BVTP 3× 8)
⑪ heat sink
⑨ two screws (BVTP 3× 16)
⑤ two connectors (CN803, CN804)
⑬ Remove the FRONT AMP board in the arrow direction.
⑥ MAIN board
⑦ connector (CN913)
③ flat type wire (19core) (CN523)
④ two screws (BVTP 3× 8)
① connector (CN713)
② flat type wire (17core) (CN522)

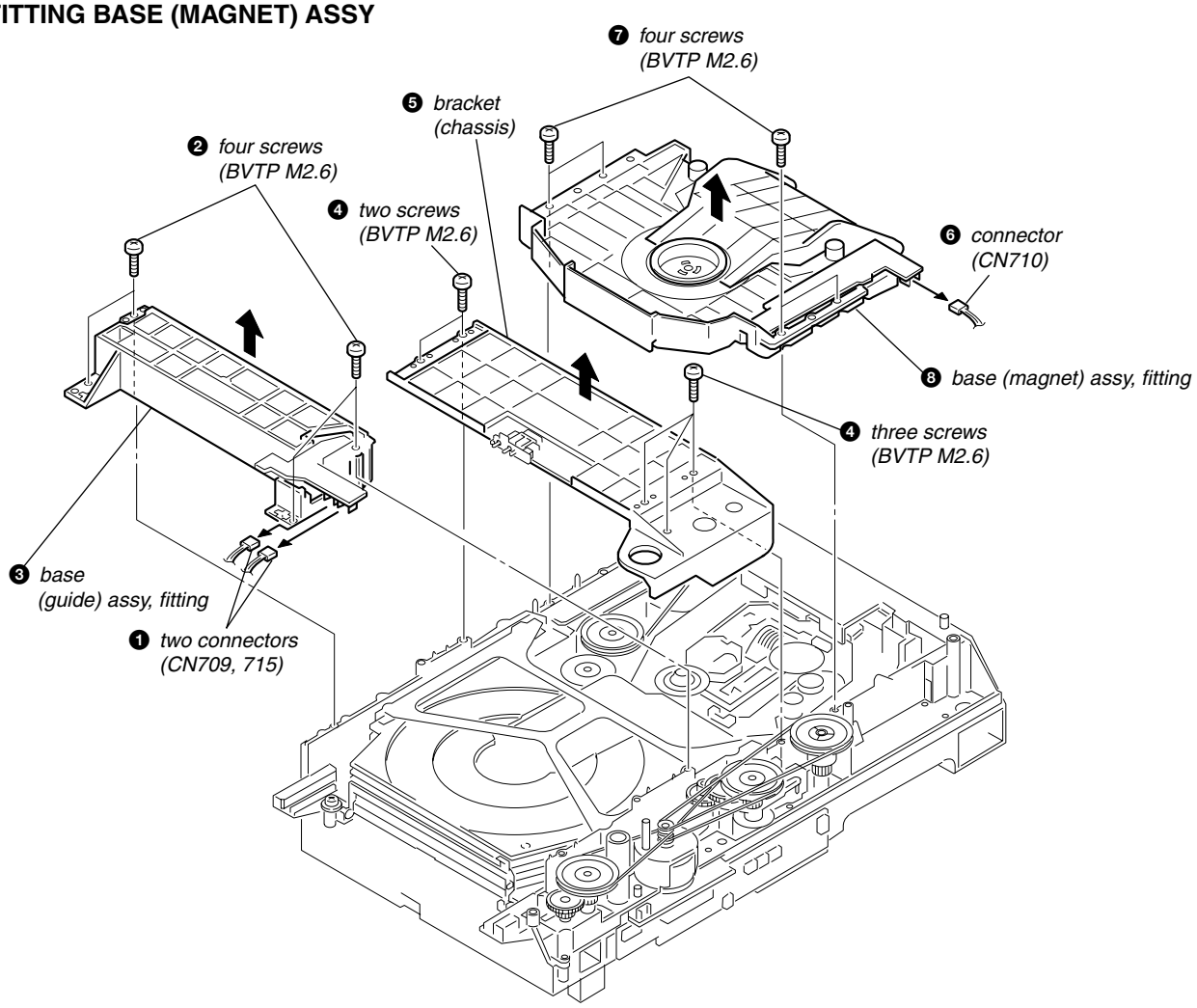
2-6. CD BASE UNIT (BU-K2BD38)


⑦ CD base unit (BU-K2BD38)
④ spring (insulator), compression
⑥ spring (insulator), compression
② chassis
⑤ two screws (PTPWH M 2.6)
③ two screws (PTPWH M 2.6)
① three screws (BVTP 3× 6)

2-7. CD MECHANISM DECK SECTION (CDM53F-K2BD38)

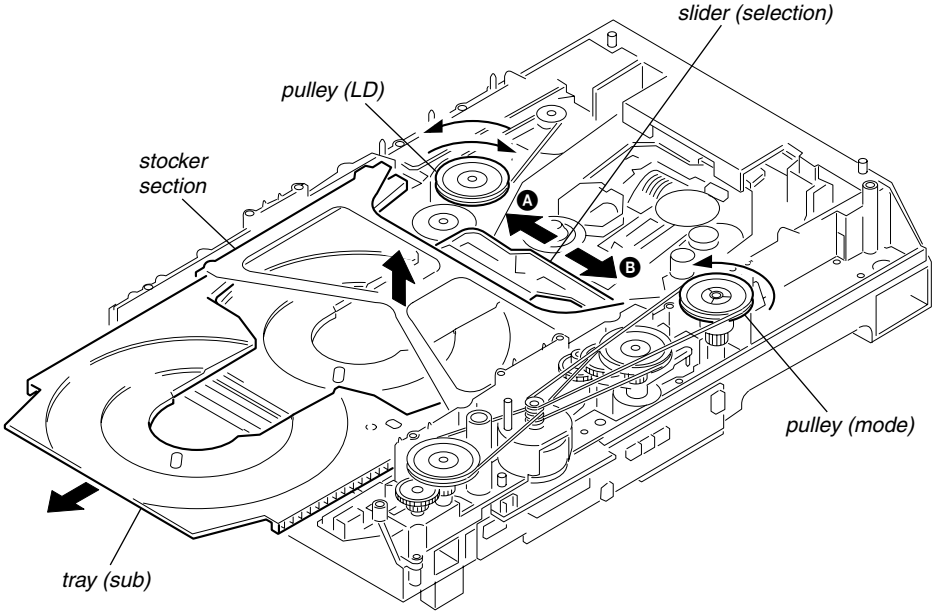

❸ chassis, sub
❹ four screws (sumitite (B3), +BV)
❺ CD mechanism deck section (CDM53F-K2BD38)
❷ two screws (BVTT 3 × 6)
❶ three screws (BVTT 3 × 6)

2-8. FITTING BASE (GUIDE) ASSY, BRACKET (CHASSIS) AND FITTING BASE (MAGNET) ASSY


❼ four screws (BVTP M2.6)
❺ bracket (chassis)
❷ four screws (BVTP M2.6)
❹ two screws (BVTP M2.6)
❻ connector (CN710)
❽ base (magnet) assy, fitting
❹ three screws (BVTP M2.6)
❸ base (guide) assy, fitting
❶ two connectors (CN709, 715)

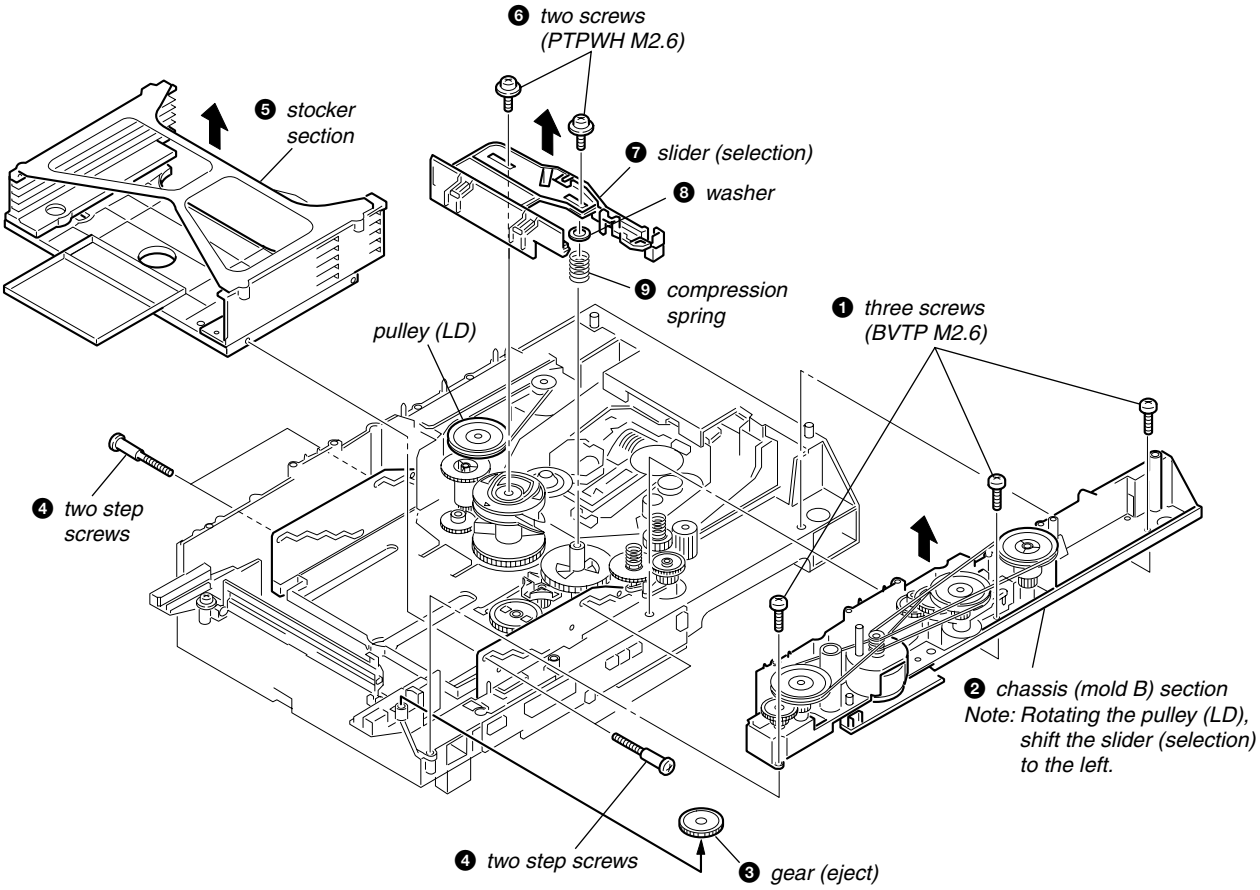
2-9. TRAY (SUB)

❶ *Rotating the pulley (LD), shift the slider (selection) in the arrow Ⓐ direction.*
❷ *Rotating the pulley (mode) in the arrow direction, adjust the tray (sub) to be removed.*
❸ *Rotating the pulley (LD), shift the slider (selection) in the arrow Ⓑ direction.*
❹ *Rotating the pulley (mode) in the arrow direction, remove the tray (sub) to be removed.*

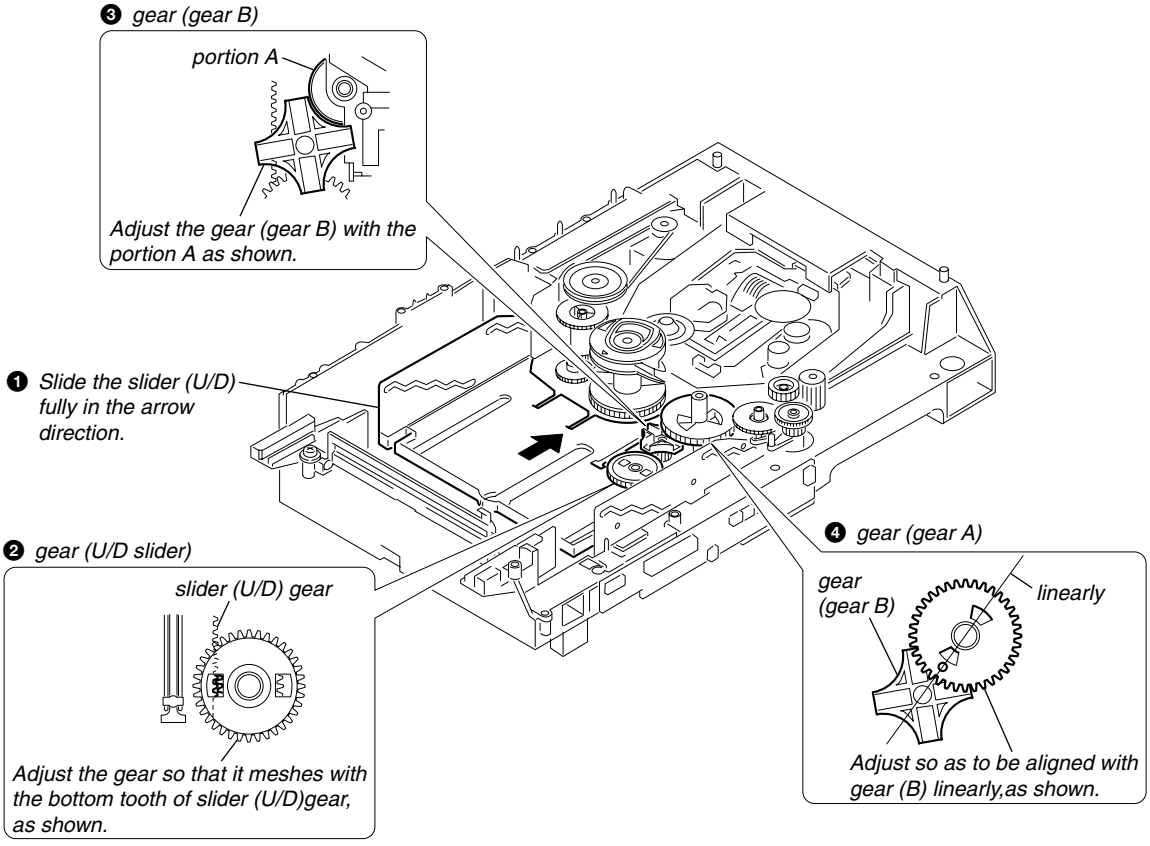


2-10. CHASSIS (MOLD B) SECTION, STOCKER SECTION AND SLIDER (SELECTION)

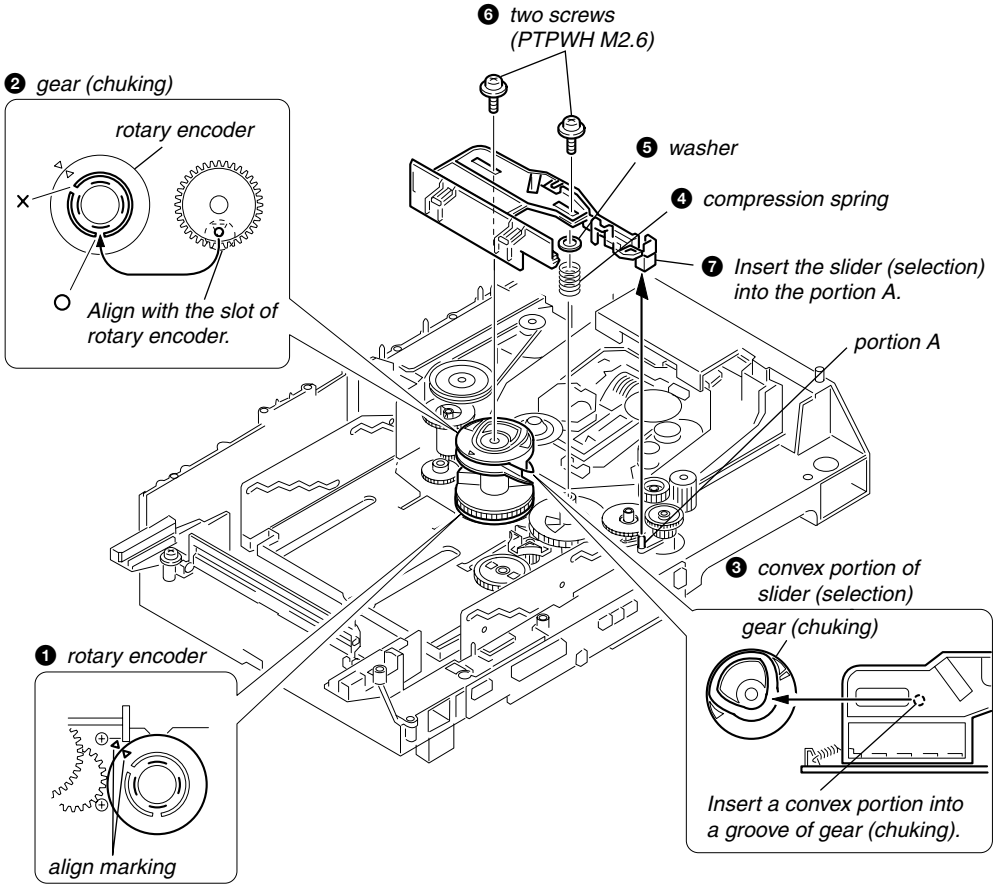
Note : In mounting the parts, refer to page 12 and 13.


❻ two screws (PTPWH M2.6)
❺ stocker section
❼ slider (selection)
❽ washer
❾ compression spring
❶ three screws (BVTP M2.6)
pulley (LD)
❹ two step screws
❷ chassis (mold B) section
Note: Rotating the pulley (LD), shift the slider (selection) to the left.
❹ two step screws
❸ gear (eject)

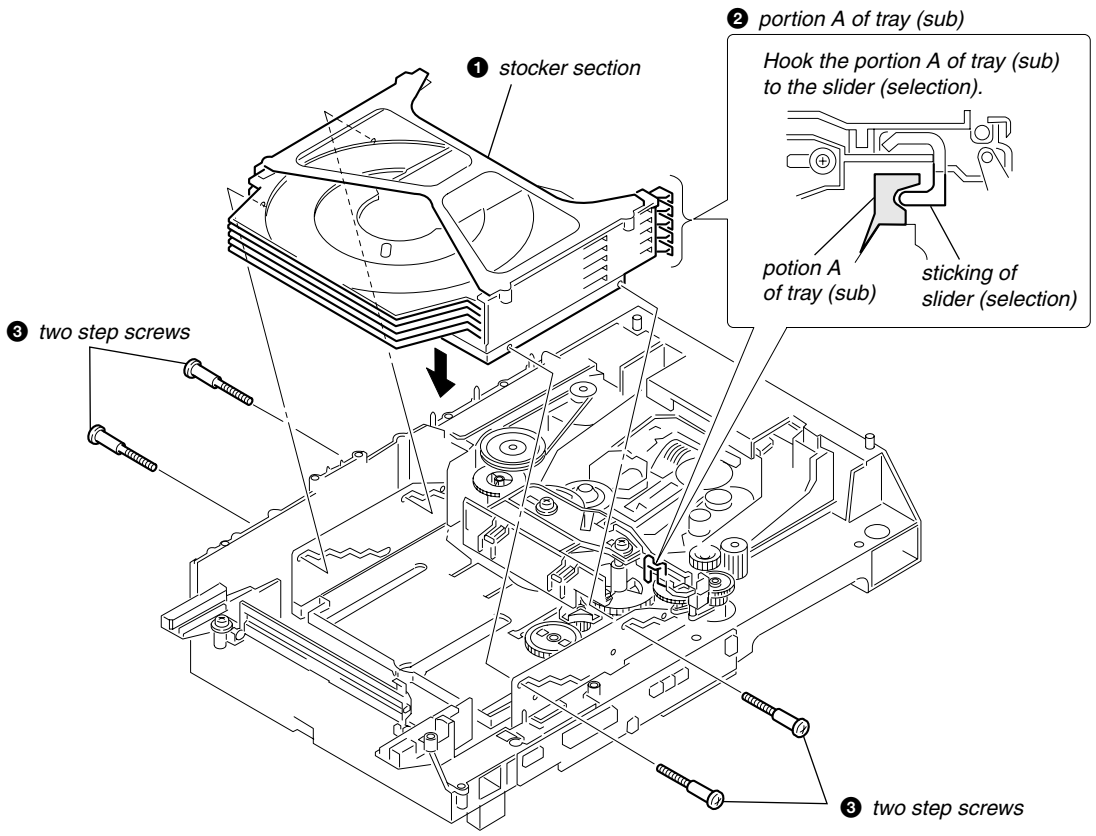
2-11. GEARS INSTALLATION


❸ gear (gear B)
portion A
Adjust the gear (gear B) with the portion A as shown.
❶ Slide the slider (U/D) fully in the arrow direction.
❷ gear (U/D slider)
slider (U/D) gear
Adjust the gear so that it meshes with the bottom tooth of slider (U/D)gear, as shown.
❹ gear (gear A)
gear (gear B)
linearly
Adjust so as to be aligned with gear (B) linearly,as shown.

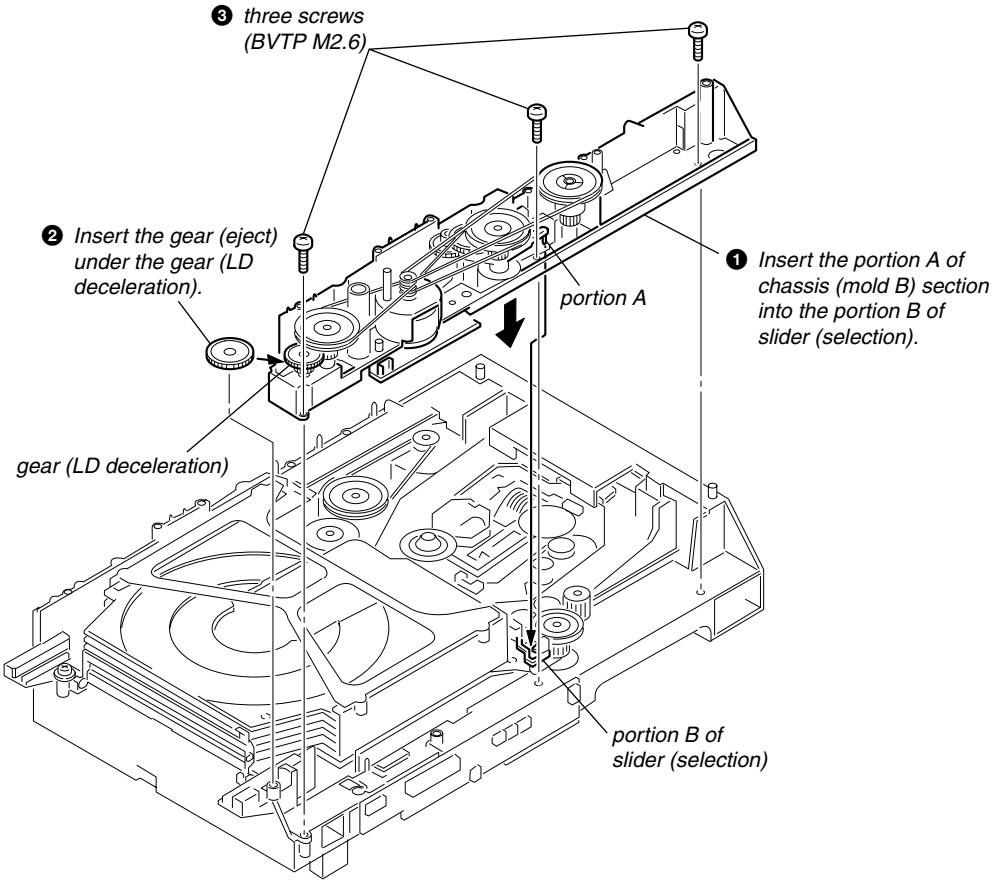
2-12. SLIDER (SELECTION) INSTALLATION


❻ two screws (PTPWH M2.6)
❷ gear (chuking)
rotary encoder
Align with the slot of rotary encoder.
❺ washer
❹ compression spring
❼ Insert the slider (selection) into the portion A.
portion A
❸ convex portion of slider (selection)
gear (chuking)
Insert a convex portion into a groove of gear (chuking).
❶ rotary encoder
align marking

2-13. STOCKER SECTION INSTALLATION


❷ portion A of tray (sub)
Hook the portion A of tray (sub) to the slider (selection).
potion A of tray (sub)
sticking of slider (selection)
❶ stocker section
❸ two step screws
❸ two step screws

2-14. CHASSIS (MOLD B) SECTION INSTALLATION


❸ three screws (BVTP M2.6)
❷ Insert the gear (eject) under the gear (LD deceleration).
portion A
❶ Insert the portion A of chassis (mold B) section into the portion B of slider (selection).
gear (LD deceleration)
portion B of slider (selection)

SECTION 3
TEST MODE

[MC Cold Reset]

• The cold reset clears all data including preset data stored in the RAM to initial conditions. Execute this mode when returning the set to the customer.

Procedure:

1. Press three buttons [■], [DISPLAY], and [DISC 5] simultaneously.
2. The fluorescent indicator tube displays "COLD RESET" and the set is reset.

[CD Ship Mode]

• This mode moves the pickup to the position durable to vibration. Use this mode when returning the set to the customer after repair.

Procedure:

1. Press [I/⏻] button to turn the set ON.
2. Press [V-GROOVE] button and [I/⏻] button simultaneously.
3. After the "STANDBY" display blinks six times, a message "LOCK" is displayed on the fluorescent indicator tube, and the CD ship mode is set.

[MC Hot Reset]

• This mode resets the set with the preset data kept stored in the memory. The hot reset mode functions same as if the power cord is plugged in and out.

Procedure:

1. Press three buttons [■], [DISPLAY], and [DISC 1] simultaneously.
2. The fluorescent indicator tube becomes blank instantaneously, and the set is reset.

[CD Service Mode]

• This mode can run the CD sled motor freely. Use this mode, for instance, when cleaning the pickup.

Procedure:

1. Press [I/⏻] button to turn the set ON.
2. Select the function "CD".
3. Press three buttons [■], [DISPLAY] , and [⏏ 3] simultaneously.
4. The CD service mode is selected.
5. With the CD in stop status, turn the shuttle knob clockwise to move the pickup to outside track, or turn the shuttle knob counter-clockwise to inside track.
6. To exit from this mode, perform as follows:
   1) Move the pickup to the most inside track.
   2) Press three buttons in the same manner as step 2.

Note: • Always move the pickup to most inside track when exiting from this mode. Otherwise, a disc will not be unloaded.
• Do not run the sled motor excessively, otherwise the gear can be chipped.

[VACS ON/OFF Mode]

• This mode is used to switch ON and OFF the VACS (Variable Attenuation Control System).

Procedure:

Press the [ENTER] and [■] buttons simultaneously. The message "VACS OFF" or "VACS ON" appears.

[Change-over of MW Tuner Step between 9 kHz and 10 kHz]

• A step of MW channels can be changed over between 9 kHz and 10 kHz.

Procedure:

1. Press [I/⏻] button to turn the set ON.
2. Select the function "TUNER", and press [TUNER/BAND] button to select the BAND "MW".
3. Press [I/⏻] button to turn the set OFF.
4. Press [MODE SELECT] and [I/⏻] buttons simultaneously, and the display of fluorescent indicator tube changes to "MW 9 k STEP" or "MW 10 k STEP", and thus the channel step is changed over.

[GC Test Mode]

• This mode is used to check the software version, FL tube, LED, keyboard and VACS.

Procedure:

1. Press three buttons [■], [DISPLAY], and [DISC 2] simultaneously.
2. LEDs and fluorescent indicator tube are all turned on.
3. When you want to enter the software version display mode, press [DISC 1]. The model number and destination are displayed.
4. Each time [DISC 1] is pressed, the display changes starting from MC version, GC version, VC version, CD version, CDM version, ST version, TC version, TA version, TM version and BR version in this order, and returns to the model number and destination display.
5. When [DISC 3] is pressed while the version numbers are being displayed except model number and destination, year, month and day of the software creation appear. When [DISC 3] is pressed again, the display returns to the software version display. When [DISC 1] is pressed while year, month and day of the software creation are being displayed, the year, month and day of creation of the software versions are displayed in the same order of version display.
6. Press [DISC 2] button, and the key check mode is activated.
7. In the key check mode, the fluorescent indicator tube displays "K 0 VO 0 STICK N". Each time a button is pressed, "K 0" value increases. However, once a button is pressed, it is no longer taken into account.
   "VO 0" value increases like 1, 2, 3 ... if rotating [VOLUME] knob in "+" direction, or it decreases like 0, 9, 8 ... if rotating in "–" direction.
   Moving the stick changes the "STICK N" display.
   When moved up : "STICK ↑"
   When moved down : "STICK ↓"
   When moved to the left : "STICK ←"
   When moved to the right : "STICK →"
8. Also when [DISC 3] is pressed after lighting of all LEDs and FL tubes, value of VACS appears.
9. To exit from this mode, press three buttons in the same manner as step 1, or disconnect the power cord.

[MC Test Mode]

• This mode is used to check operations of the respective sections of Amplifier, Tuner, CD and Tape.

Procedure:

1. Press the [I/⏻] button to turn on the set.
2. Press the three buttons of [■], [DISPLAY] and [DISC 3] simultaneously.
3. A message "TEST MODE" appears on the FL display tube.
4 When [△ (STIC UP)] button is pressed, GEQ increases to its maximum and a message "GEQ MAX" appears.
5. When [▽ (STIC DOWN)] button is pressed, GEQ decreases to its minimum and a message "GEQ MIN" appears.
6. When [◁ (STIC LEFT)] or [▷ (STIC RIGHT)] button is pressed, GEQ is set to flat and a message "GEQ FLAT" appears.
7. When the VOLUME control knob is turned clockwise even slightly, the sound volume increases to its maximum and a message "VOLUME MAX" appears for two seconds, then the display returns to the original display.
8. When the VOLUME control knob is turned counter-clockwise even slightly, the sound volume decreases to its minimum and a message "VOLUME MIN" appears for two seconds, then the display returns to the original display.
9. In the test mode, the default-preset channel is called even when the TUNER is selected and an attempt is made to call the preset channel that has been stored in memory, by operating the Shuttle knob. (It means that the memory is cleared.)
10. When CD is selected and press [MODE SELECT], and press [ENTER] when "Set up Mode" is displayed.
    Press [ENTER] when "CD Set up?" is displayed.
    Move the stick left and right to display "CD Edit Start?", and press [ENTER], the disc that is being chucked at this moment becomes the default setting. It means that the default disc only is accessed when any other discs are selected even though the display indication changes accordingly. At the same time, the [⏏1] to [⏏5] cannot be accepted. (It means that the tray motor and the turntable motor are disabled of their operation.)
11. When a tape is inserted in Deck B and recording is started, the input source function selects VIDEO automatically.
12. When [■] button is pressed to stop recording, the Tape (Deck) B is selected and tape is rewound using the [◁◁] button, tape is rewound, tape is stops at around the record-starting position and playback of the recorded portion of the tape is started. If PAUSE is inserted even once during recording, tape is rewound to the position around the PAUSE position and is played back.
13. When the [HI-DUB] Button is press during playback of Deck B, either normal speed or high speed can be selected by this button.
14. Select the desired loop by pressing [MODE SELECT], and press [ENTER] when "Set up Mode" is displayed.
    Press [ENTER] when "CD Set up?" is displayed.
    Move the stick left and right to display "Tape Set Up?", and press [ENTER].
    Press [ENTER] when "Direction Set Up?" is displayed.
    Move the stick left and right to display "Cycle?", and press [ENTER].
    Insert a test tape AMS-110A or AMS-RO to Deck A.
15. Press the [CD SYNC] button to enter the AMS test mode.
16. After a tape is rewound first, the FF AMS is checked, and the mechanism is shut off after detecting the AMS signal twice.
17. Then the REW AMS is checked and the mechanism is shut off after detecting the AMS signal twice.
18. When the check is complete, a message of either OK or NG appears.
19. When you want to exit this mode, press the [I/⏻] button twice. The cold reset is enforced at the same time.

[Aging Mode]

This mode can be used for operation check of CD section and tape deck section.

- If an error occurred:
  The aging operation stops and display status.
- If no error occurs:
  The aging operation continues repeatedly.

1. Operating method of Aging Mode

Turn on the main power and select "CD" of the function.

1) Set a disc in DISC1 tray. Select ALL DISC CONTINUE, and REPEAT OFF.
2) Load the tapes recording use into the decks A and B respectively.
3) Press three buttons [■] , [DISPLAY] , and [DISC 4] simultaneously.
4) Aging operations of CD and tape are started at the same time.

• Tape Deck

1. The tape in deck A is rewound. "TAPE A AG-1" is displayed.
2. The FWD side of deck A is played for two minutes.
   "TAPE A AG-2" is displayed.
3. The tape in deck A is fast forwarded. "TAPE A AG-3" is displayed. Fast forward is carried out for 20 seconds or to the tape end.
4. The RVS side of deck A is played for two minutes.
   "TAPE A AG-4" is displayed.
5. The tape in deck A is rewound. "TAPE A AG-5" is displayed.
6. The FWD side of deck B is played for two minutes.
   "TAPE B AG-2" is displayed.
7. The tape in deck B is fast forwarded. "TAPE B AG-3" is displayed. Fast forward is carried out for 20 seconds or to the tape end.
8. The RVS side of deck B is played for two minutes.
   "TAPE B AG-4" is displayed.
9. The tape in deck A is rewound. "TAPE A AG-5" is displayed.
10. Repeated from step 2.

• CD

1. The tray rotates.
2. DISC 5 is chucked.
3. The TOC is read.
4. The first track is played for 3 seconds.
5. The last track is played for 3 seconds.
6. DISC 1 is open.
7. DISC 1 is close.
8. Repeated from step 2.

2. Correction of Errors
[When due to tape deck]
Stopped while tape aging operation with the “ ” displayed state.

[When due to CD]
Press [■], [DISPLAY], and [⏏] together to display the error code.

- Display of number of mechanism errors
  Move the stick to the left and right to display “CDM Err Count *”.
  * is the number of mechanism errors.

- Display of mechanism error
  Move the stick to the left and right to display “CDM E**D##$$%%!!”.
  Move the stick up and down to send the error number.

  ** : Error number 00 is the latest error.
  The larger the number, the older will the error be. (Maximum 9)

  ## : FF is the mechanism error after mechanism initialization ends.

  $$: Judge from the first digit of the error number. (Don’t care the second digit.)
  When the error number is 1 or 2, it indicates mechanism error in tray loading between the stocker position and behind it.

  %% : Judge from the first digit of the error number. (Don’t care the second digit.)
  When the error number is 2, it indicates mechanism error in the up/down movements of the stocker.

  !! : Judge from the first digit of the error number. (Don’t care the second digit.)
  When the error number is 2, it indicates mechanism error during switching of the clamper and mode.

- No DISC error display
  Move the stick left and right to display “No Disc Count *”.
  * means the number of no discs.

- No DISC error display
  Move the stick left and right to display “No E**D##$$%%00”.
  Move the stick up and down to send the error number.

  ** : Error number 01 is the latest error.
  The larger the number, the older will the error be. (Maximum 3)

  ## : 01 .... FOCUS ERROR
  02 .... GFS ERROR
  03 .... SET UP ERROR

  $$: 00 .... Judged as No DISC without attempting chucking retry
  02 .... Judged as No DISC after chucking retry

  %% : Judged with the first digit of the error number in the state where No DISC has been determined.
  (Don’t care the second digit.)
  1 ..... STOP
  2 ..... SET UP
  3 ..... TOC Read
  4 ..... Access
  5 ..... PLAY
  6 ..... PAUSE
  7 ..... Manual Search (during PLAY)
  8 ..... Manual Search (during PAUSE)

3. Ending the Aging Mode
1) End the Aging Mode with the power off.
2) To reset the CD error history, be sure to perform cold reset.

SECTION 4
MECHANICAL ADJUSTMENTS

Precaution

1. Clean the following parts with a denatured alcohol-moistened swab:
   - record/playback heads
   - erase head
   - capstan
   - pinch rollers
   - rubber belts
   - idlers
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Mode	Torque meter	Meter reading
FWD	CQ-102C	3.04 – 6.96 N • m (31 to 71 g • cm) (0.43 – 0.98 oz • inch)
FWD back tension	CQ-102C	0.20 – 0.58 N • m (2 to 6 g • cm) (0.02 – 0.08 oz • inch)
REV	CQ-102RC	3.04 – 6.96 N • m (31 to 71 g • cm) (0.43 – 0.98 oz • inch)
REV back tension	CQ-102RC	0.20 – 0.58 N • m (2 to 6 g • cm) (0.02 – 0.08 oz • inch)
FF/REW	CQ-201B	6.97 – 14.02 N • m (71 to 143 g • cm) (0.98 – 1.99 oz • inch)
FWD tension	CQ-403A	0.98 N • m or more (100 g or more) (3.53 oz or more)
REV tension	CQ-403R	0.98 N • m or more (100 g or more) (3.53 oz or more)

SECTION 5
ELECTRICAL ADJUSTMENTS

DECK SECTION **0 dB=0.775V**

1. Demagnetize the record/playback head with a head demagnetizer.
2. Do not use a magnetized screwdriver for the adjustments.
3. After the adjustments, apply suitable locking compound to the parts adjusted.
4. The adjustments should be performed with the rated power supply voltage unless otherwise noted.
5. The adjustments should be performed in the order given in this service manual. (As a general rule, playback circuit adjustment should be completed before performing recording circuit adjustment.)
6. The adjustments should be performed for both L-CH and R-CH.
7. Switches and controls should be set as follows unless otherwise specified.

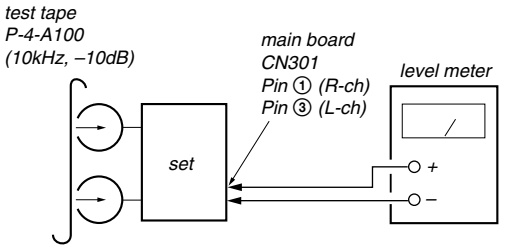
Tape	Signal	Used for
P-4-A100	10 kHz, –10 dB	Azimuth Adjustment
WS-48B	3 kHz, 0 dB	Tape Speed Adjustment
P-4-L300	315 Hz, 0 dB	Level Adjustment

Record/Playback Head Azimuth Adjustment (Deck A, Deck B)

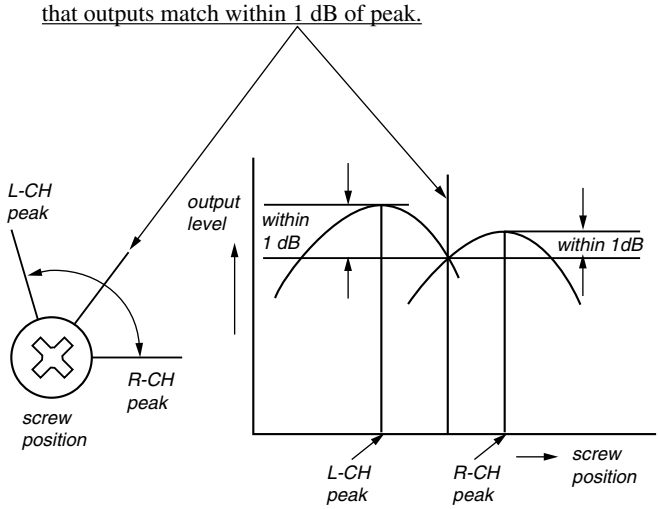
Note: Perform this adjustments for both decks.

Procedure:

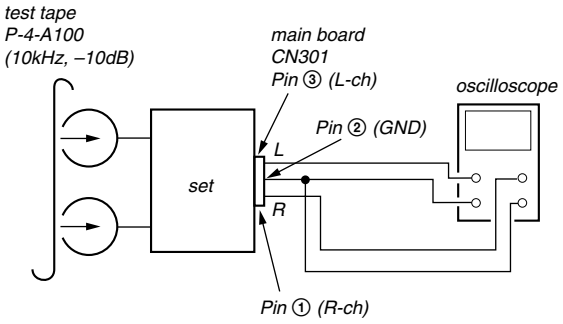
1. Mode : Playback

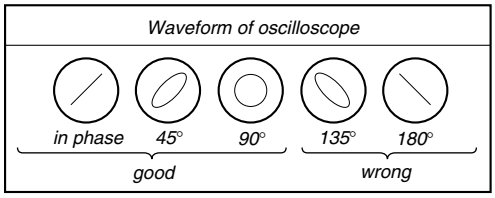


2. Turn the adjustment screw and check output peaks. If the peaks do not match for L-CH and R-CH, turn the adjustment screw so that outputs match within 1 dB of peak.



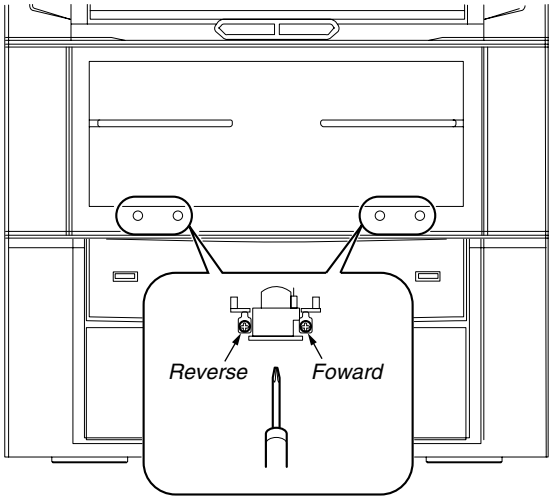
3. Mode: Playback





4. After the adjustments, apply suitable locking compound to the parts adjusted.

Adjustment Location: Playback Head (Deck A)
Record/Playback/Erase Head (Deck B)



Tape Speed Adjustment (Deck A)

Note: Set the test mode using the following method and begin tape speed adjustment.
In the test mode, the speed will switch to double speed or normal speed each time the HI-SPEED DUB button is pressed.

Procedure:
With the power turned ON, press the ■ button, DISPLAY button, and DISC 3 button simultaneously.
(The "VOLUME" on the fluorescent display tube will blink while in the test mode.)
To exit the test mode, press the I/⏻ button.

1. Insert the WS-48B into deck B.
2. Press the ▷ button of deck B.
3. Press the HI-DUB button and play the tape at double speed.
4. Adjust RV1001 of the LEAF SW board so that the reading of the frequency counter becomes 6000 ± 180 Hz.
5. Press the HI-DUB button and play the tape at normal speed.
6. Adjust RV1002 of the LEAF SW board so that the reading of the frequency counter becomes 3000 ± 90 Hz.

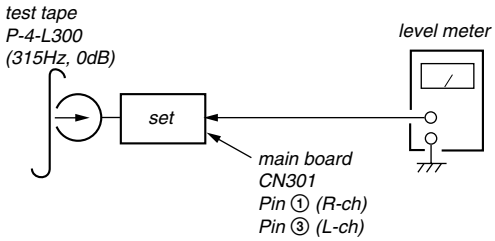
Adjustment Location: LEAF SW board

Sample Value of Wow and flutter

W.RMS (JIS) less than 0.3%
(test tape: WS-48B)

Playback Level Adjustment (Deck A, Deck B)

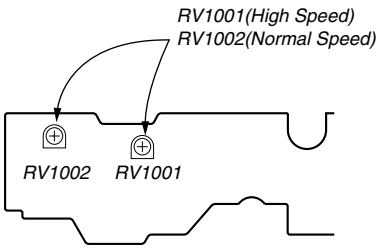
Procedure:
Mode: Playback



Deck A is RV311 (L-CH) and RV411 (R-CH), deck B is RV301 (L-CH) and RV401 (R-CH)
so that adjustment within the following adjustment level.

Adjustment level:
CN301 playback level: 301.5 to 338.3 mV (–8.2 to –7.2 dB)
level difference between the channels: within ± 0.5 dB
Adjustment Location: AUDIO board

Adjustment Location [LEAF SW BOARD]

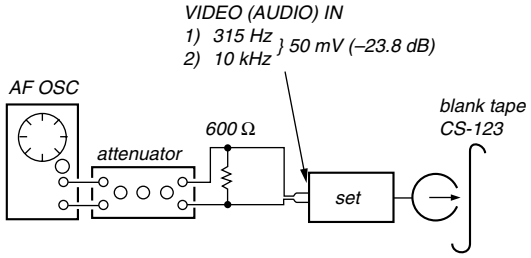


Record Bias Adjustment (Deck B)

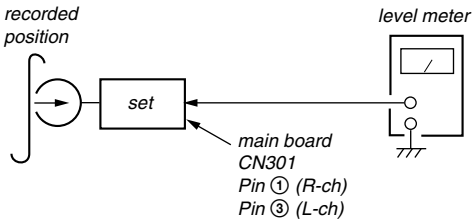
Procedure:

INTRODUCTION
When set to the test mode performed in **Tape Speed Adjustment**, when the tape is rewound after recording, the "REC memory mode" which rewinds only the recorded portion and playback is set.
This "REC memory mode" is convenient for performing this adjustment. During recording, the input signal FUNCTION will automatically switch to VIDEO.
(After recording, press the ◀◀ button without stopping will return to the position where recording was started.)

1. Press FUNCTION button to select VIDEO. (This step is not necessary if the above test mode has already been set.)
2. Insert a tape into deck B, press the REC PAUSE/START button, and then press the ▷ button to start recording.
3. Mode: Record



4. Mode: Playback



5. Confirm playback the signal recorded in step 2 become adjustment level as follows.
   If these levels do not adjustment level, adjust the RV341 (L-CH) and RV441 (R-CH) on the AUDIO board to repeat steps 3 and 4.

Adjustment level: The playback output of 10 kHz level difference against 315 Hz reference should be ± 1.0 dB.

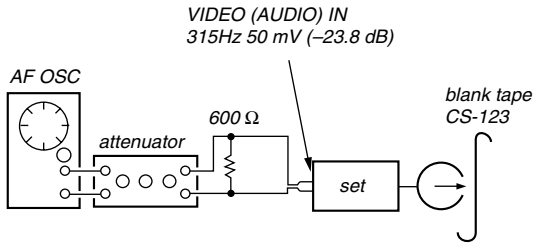
Adjustment Location: AUDIO board

Record Level Adjustment (Deck B)

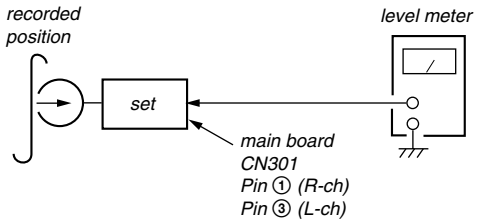
Procedure:

INTRODUCTION
When set to the test mode performed in **Tape Speed Adjustment**, when the tape is rewound after recording, the "REC memory mode" which rewinds only the recorded portion and playback is set.
This "REC memory mode" is convenient for performing this adjustment. During recording, the input signal FUNCTION will automatically switch to VIDEO.
(After recording, press the ◀◀ button without stopping will return to the position where recording was started.)

1. Press FUNCTION button to select VIDEO. (This step is not necessary if the above test mode has already been set.)
2. Insert a tape into deck B, press the REC PAUSE/START button, and then press the ▷ button to start recording.
3. Mode: Record



4. Mode: Playback

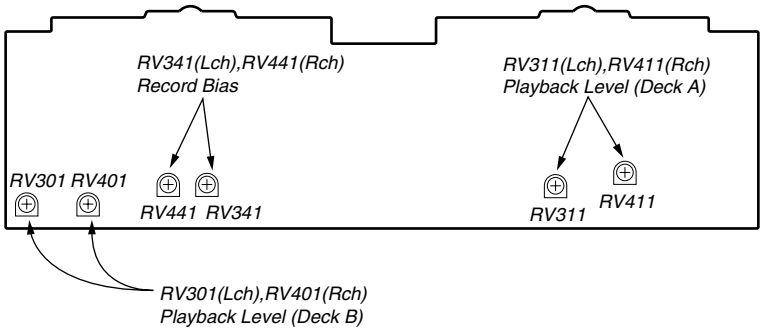


5. Confirm playback the signal recorded in step 2 become adjustment level as follows.
   If these levels do not adjustment level, adjust the RV301 (L-CH) and RV351 (R-CH) on the MAIN board to repeat steps 3 and 4.

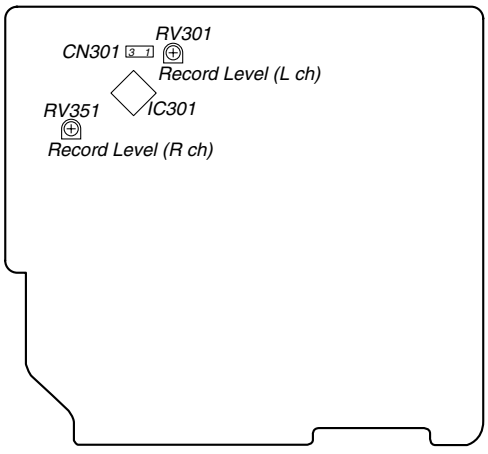
Adjustment level:
CN301 playback level: 47.2 to 53.0 mV (–24.3 to –23.3 dB)

Adjustment Location: MAIN board

Adjustment Location:
[AUDIO BOARD]



[MAIN BOARD]

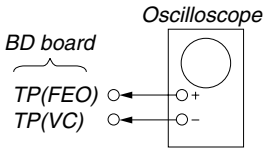


CD SECTION

Note :

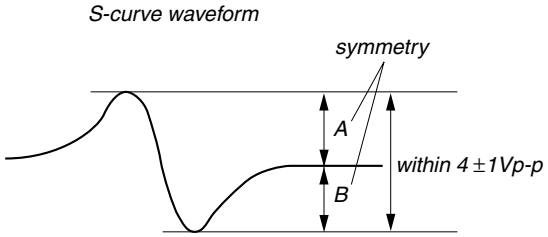
1. CD Block is basically designed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10MΩ impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

S-Curve Check



Procedure :

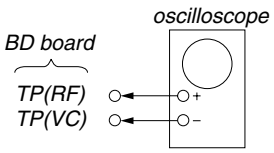
1. Connect oscilloscope to TP (FEO).
2. Connect between TP (FEI) and TP (VC) by lead wire.
3. Connect between TP (AGCCON) and TP (GND) by lead wire.
4. Turn Power switch on.
5. Load a disc (YEDS-18) and actuate the focus search. (In consequence of open and close the disc tray, actuate the focus search)
6. Confirm that the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 4 ±1 Vp-p.



7. After check, remove the lead wire connected in step 2 and 3.

Note : • Try to measure several times to make sure than the ratio of A : B or B : A is more than 10 : 7.
• Take sweep time as long as possible and light up the brightness to obtain best waveform.

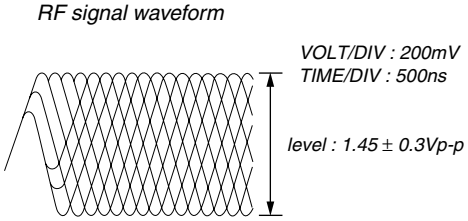
RF Level Check



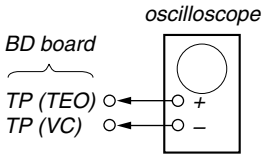
Procedure :

1. Connect oscilloscope to TP (RF).
2. Connect between TP (AGCCON) and TP (GND) by lead wire.
3. Turned Power switch on.
4. Load a disc (YEDS-18) and playback.
5. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.
6. After check, remove the lead wire connected in step 2.

Note: Clear RF signal waveform means that the shape "◊" can be clearly distinguished at the center of the waveform.

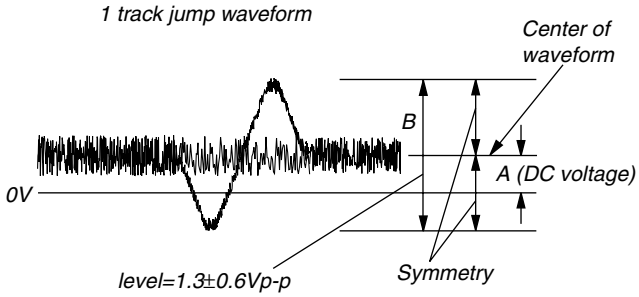


E-F Balance (1 Track jump) Check



Procedure:

1. Connect oscilloscope to TP (TEO) and TP (VC) board.
2. Turned Power switch on.
3. Load a disc (YEDS-18) and playback the number five track.
4. Press the ▶II button. (Becomes the 1track jump mode.)
5. Confirm that the level B and A (DC voltage) on the oscilloscope waveform.



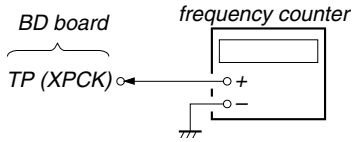
Specification level: $\frac{A}{B}$ x 100=less than ±22%

6. After check, remove the lead wire connected in step 1.

RF PLL Free-run Frequency

Procedure :

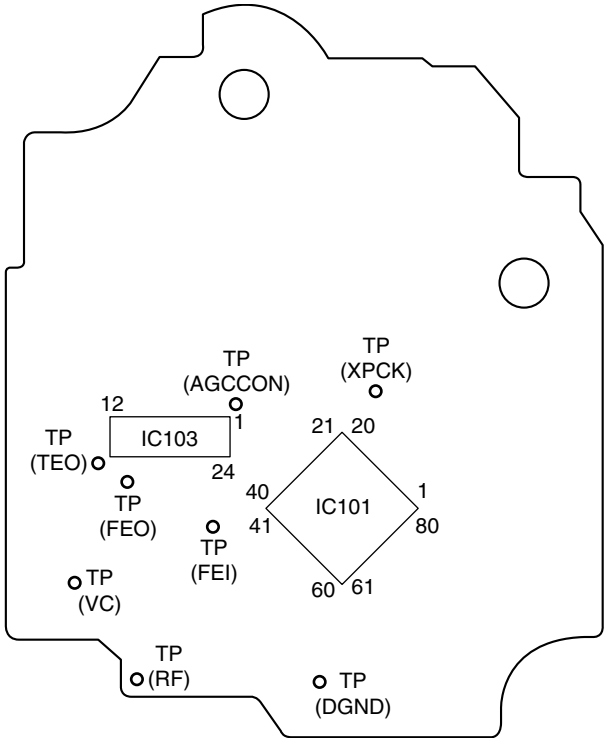
1. Connect frequency counter to test point (XPCK) with lead wire.



2. Turned Power switch on.
3. Put the disc (YEDS-18) in to play the number five track. Confirm that reading on frequency counter is 4.3218MHz.

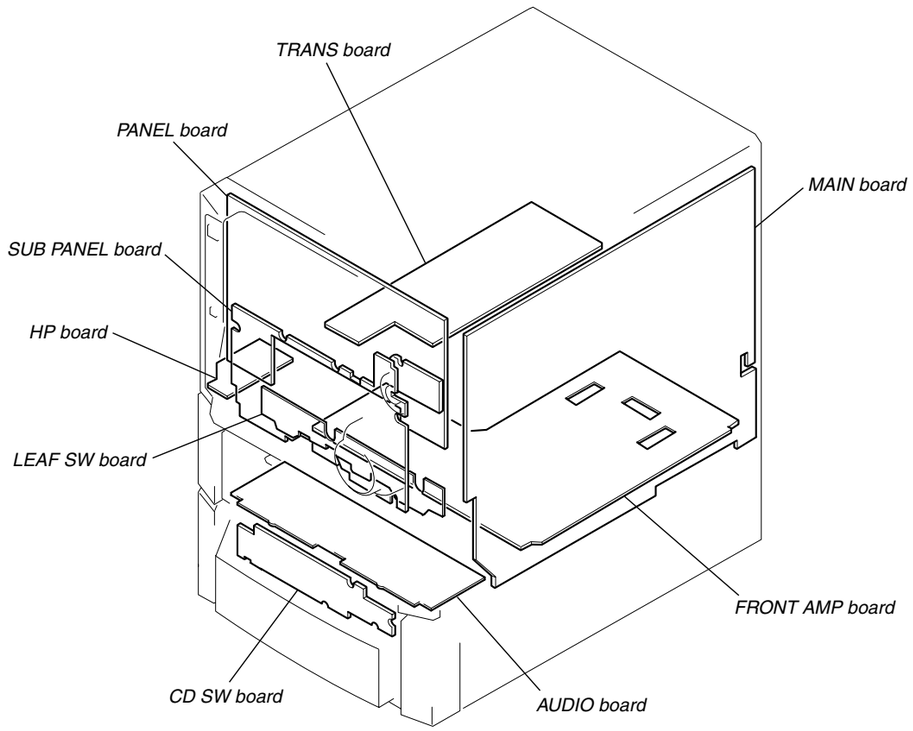
Adjustment Location:

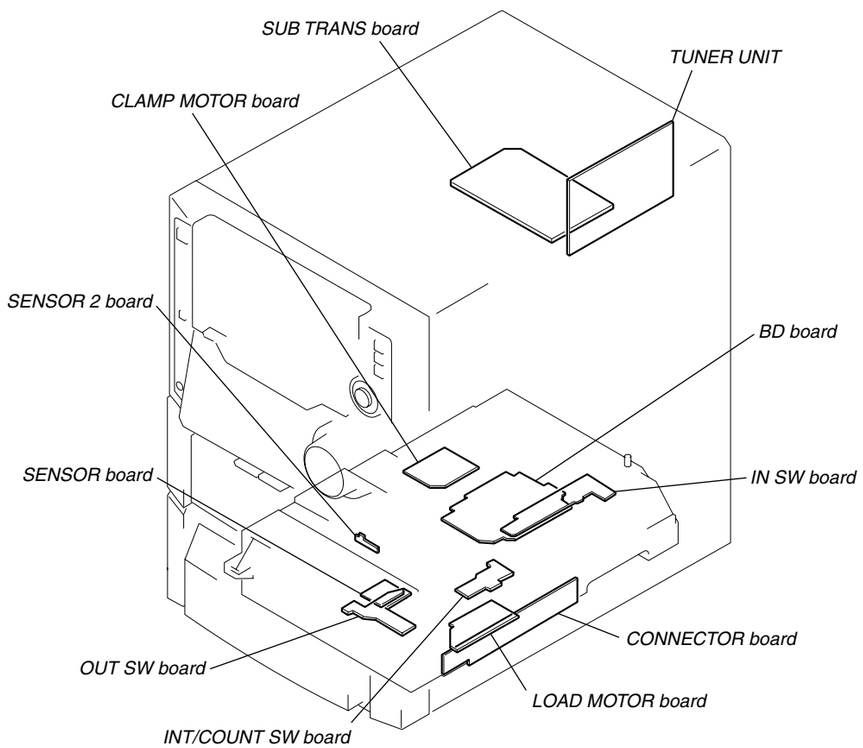
[BD BOARD] (Conductor Side)



SECTION 6
DIAGRAMS

6-1. CIRCUIT BOARDS LOCATION





THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

For schematic diagrams.

Note:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- : nonflammable resistor.
- : fusible resistor.
- : panel designation.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- B+ : B+ Line.
- B− : B− Line.
- : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  - : FM
  - : VIDEO/MD (AUDIO)
  - : PB (DECK A)
  - : PB (DECK B)
  - : REC (DECK B)
  - : CHROMA
  - : Y
  - : VIDEO
  - : CD
  - : digital out
  - : PHONO
- Abbreviation
  CND : Canadian model.

For printed wiring boards.

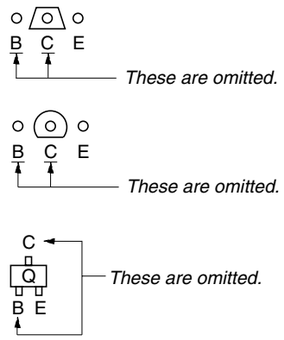
Note:

- ○—— : parts extracted from the component side.
- —— : parts extracted from the conductor side.
- ○ : Through hole.
- : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

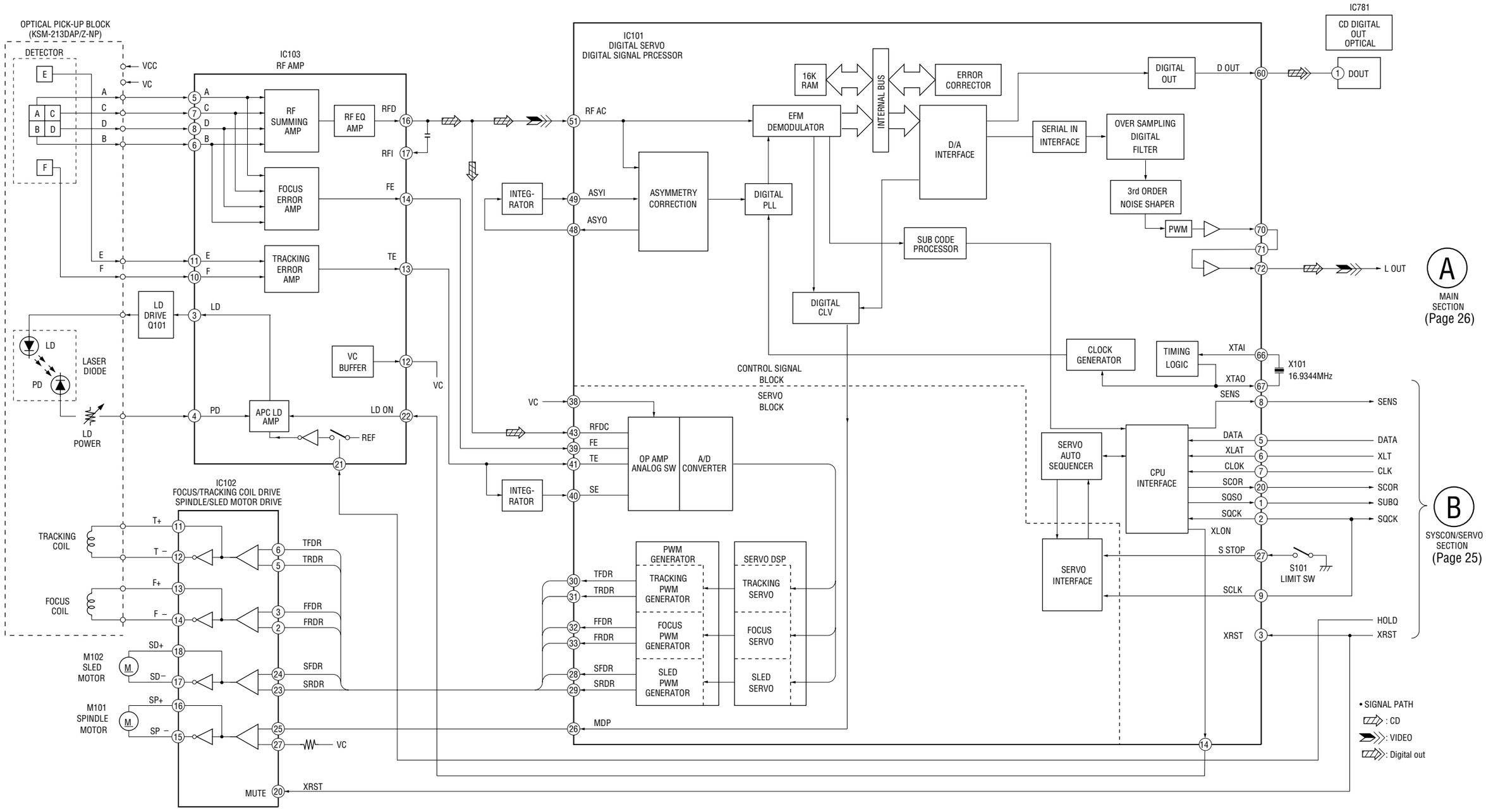
Caution:
Pattern face side (Side B): Parts on the pattern face side seen from the pattern face are indicated.
Parts face side (Side A): Parts on the parts face side seen from the parts face are indicated.

- **Indication of transistor**



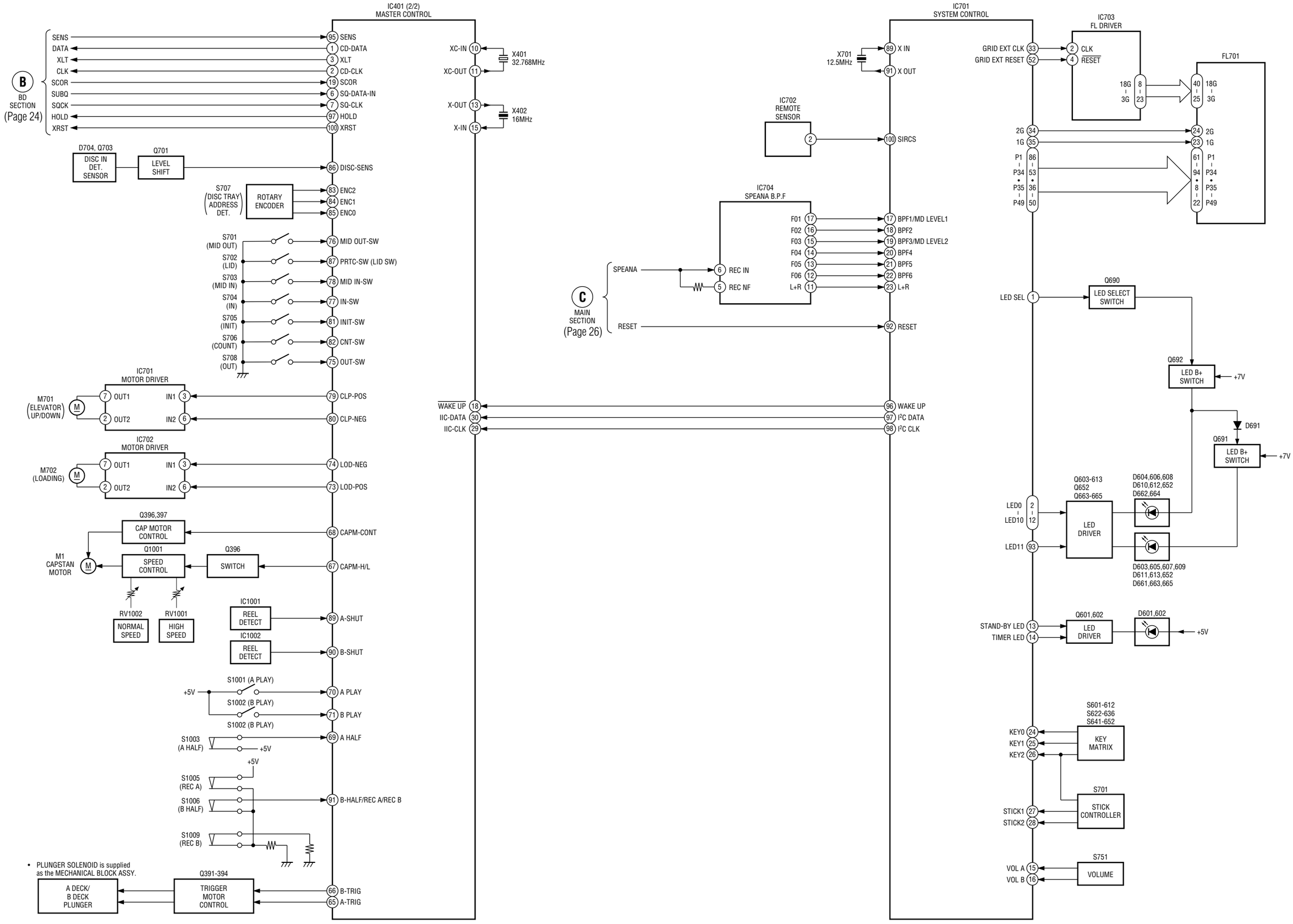
23

6-2. BLOCK DIAGRAMS
– BD SECTION –



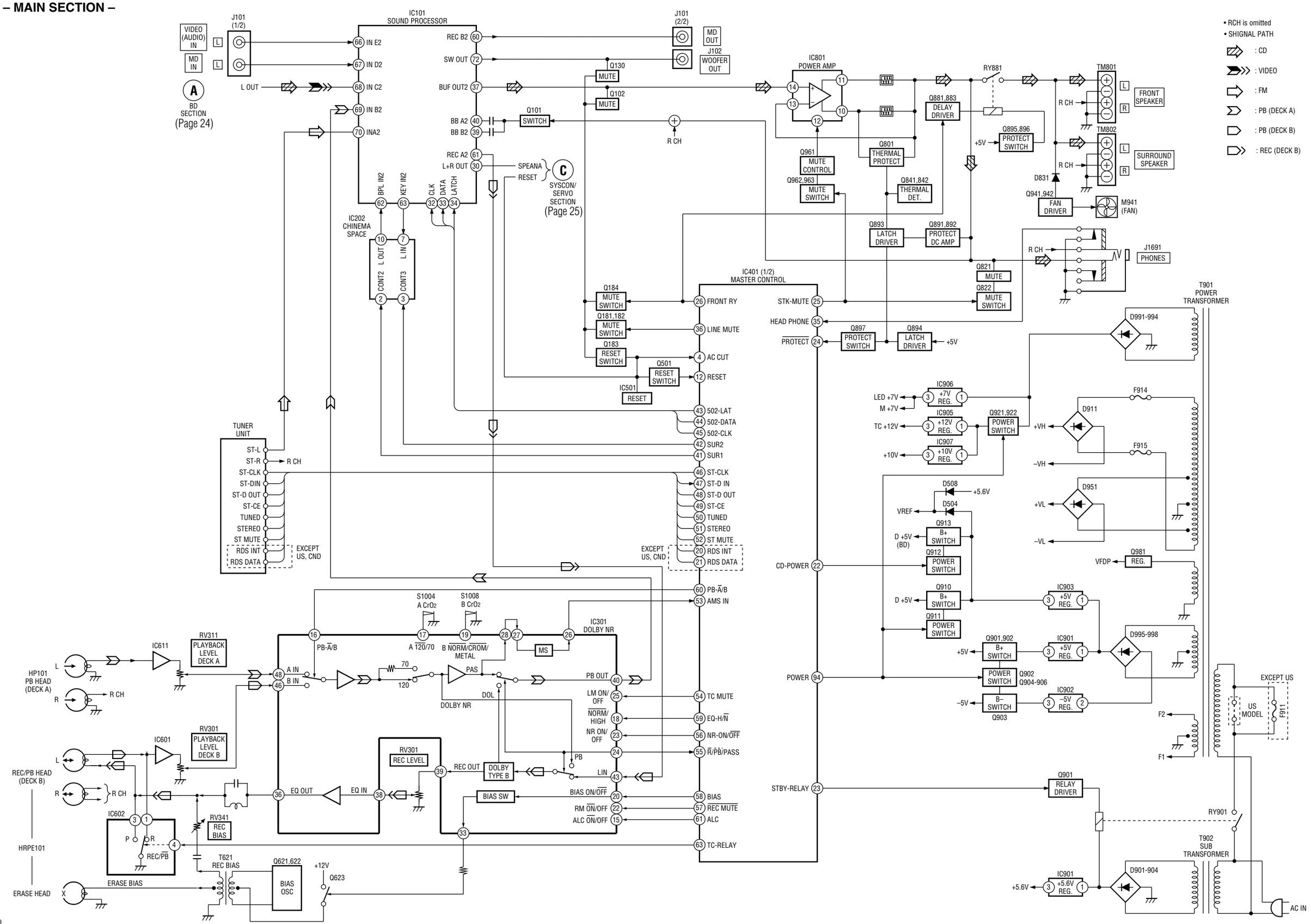
09

– SYSCON/SERVO SECTION –



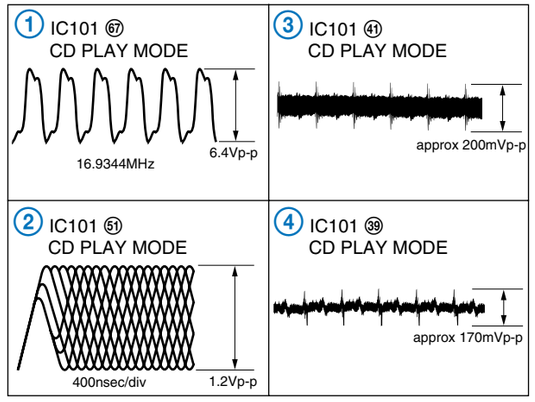
09

– MAIN SECTION –

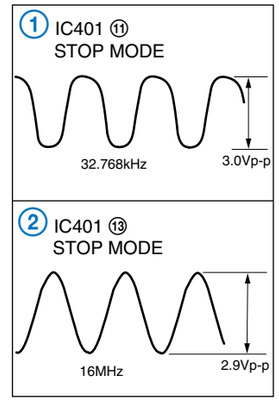


• **WAVEFORMS**

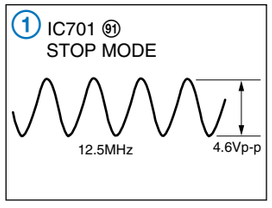
– BD BOARD –



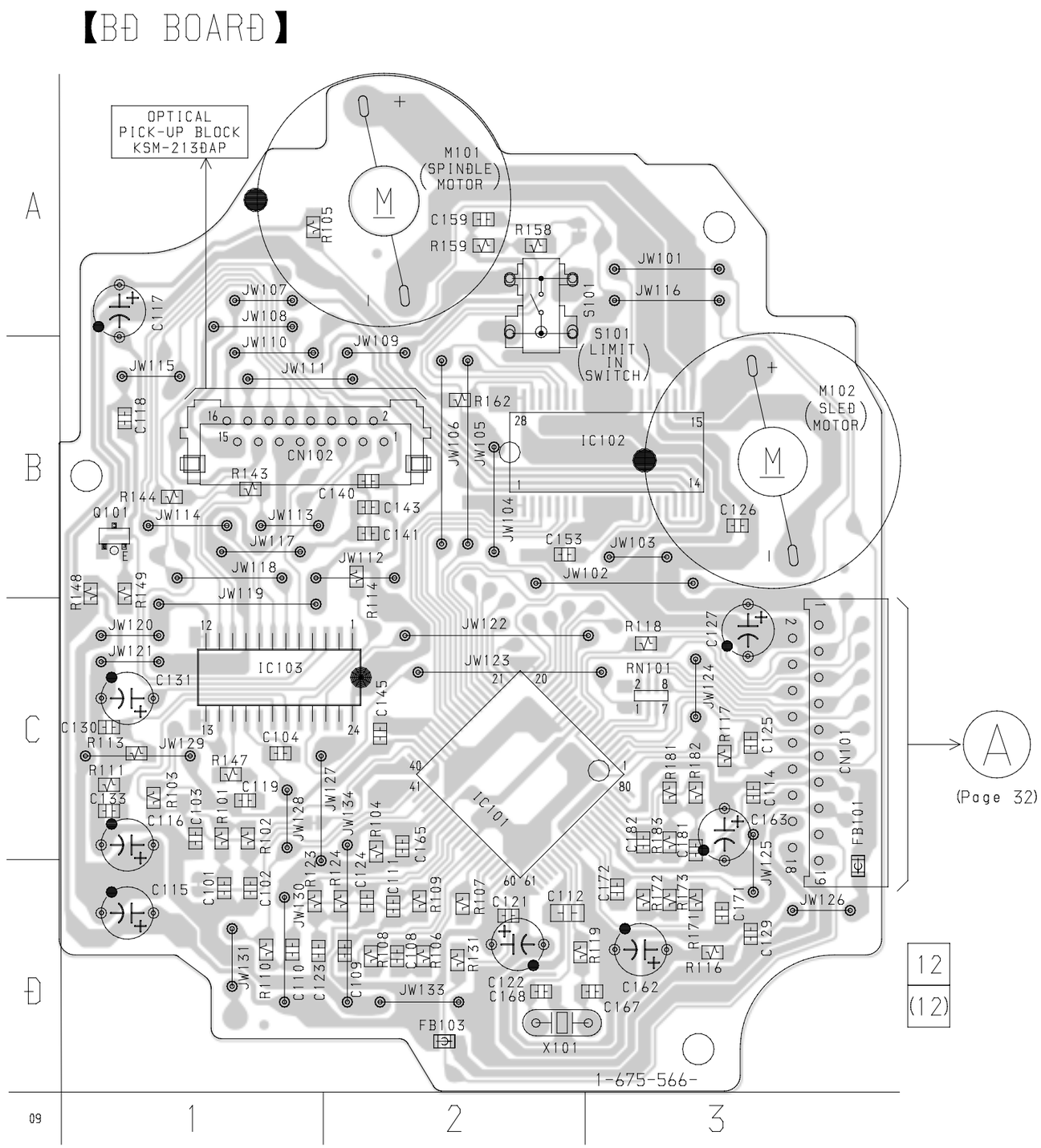
– MAIN BOARD –



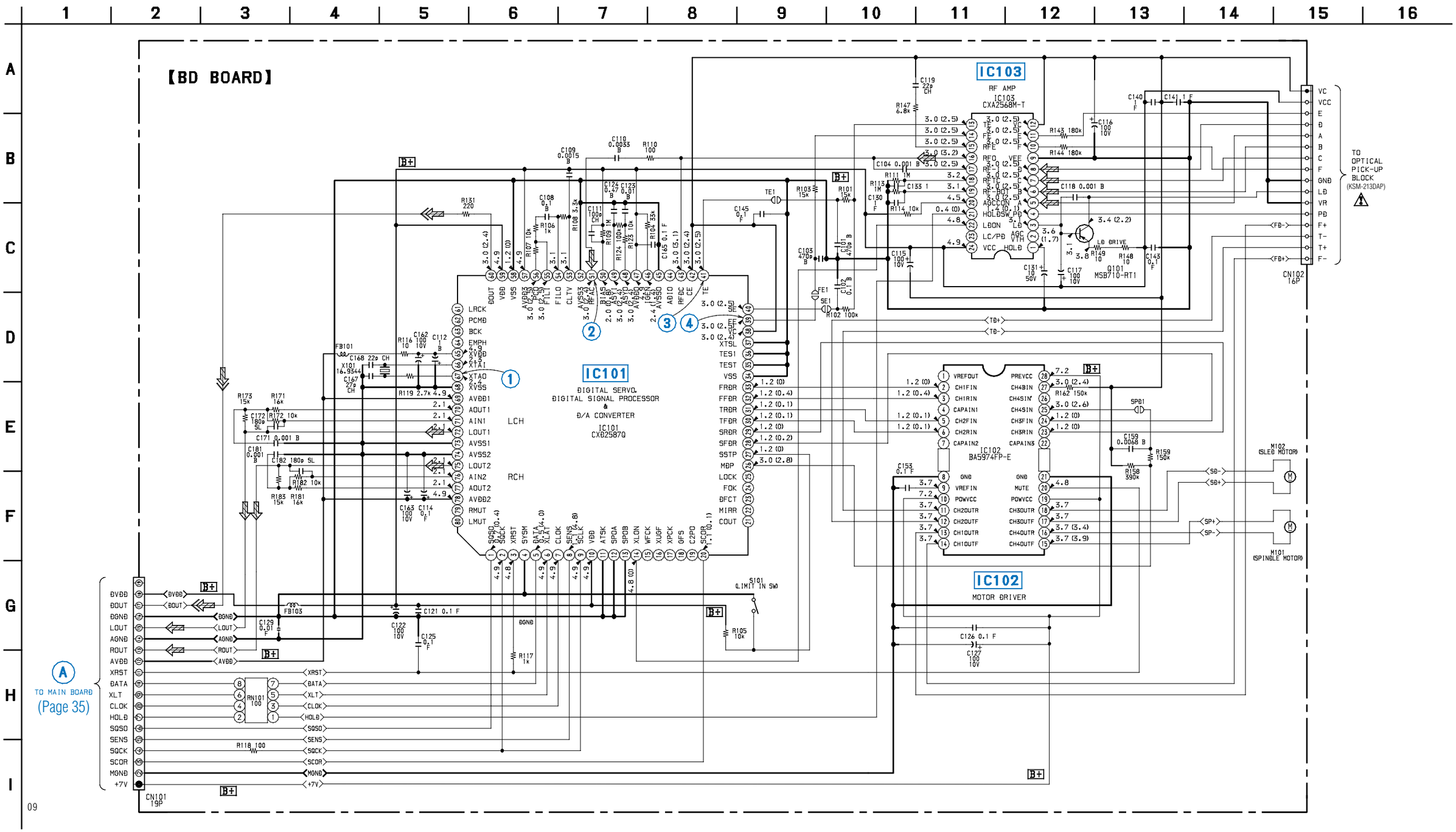
– PANEL BOARD –



6-3. PRINTED WIRING BOARD – BD SECTION – • See page 23 for Circuit Boards Location.

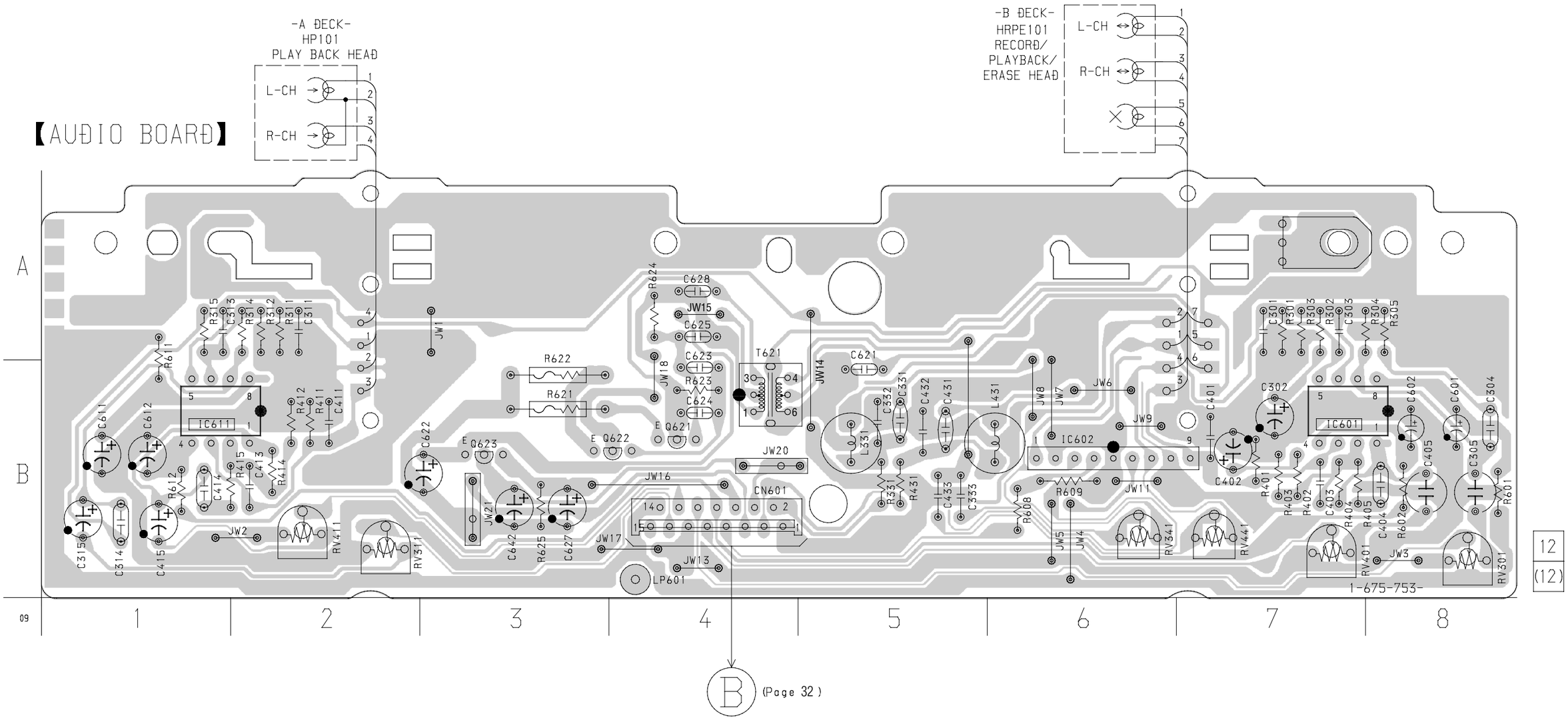


6-4. SCHEMATIC DIAGRAM – BD SECTION – • See page 27 for Waveforms. • See page 47 for IC Block Diagrams.

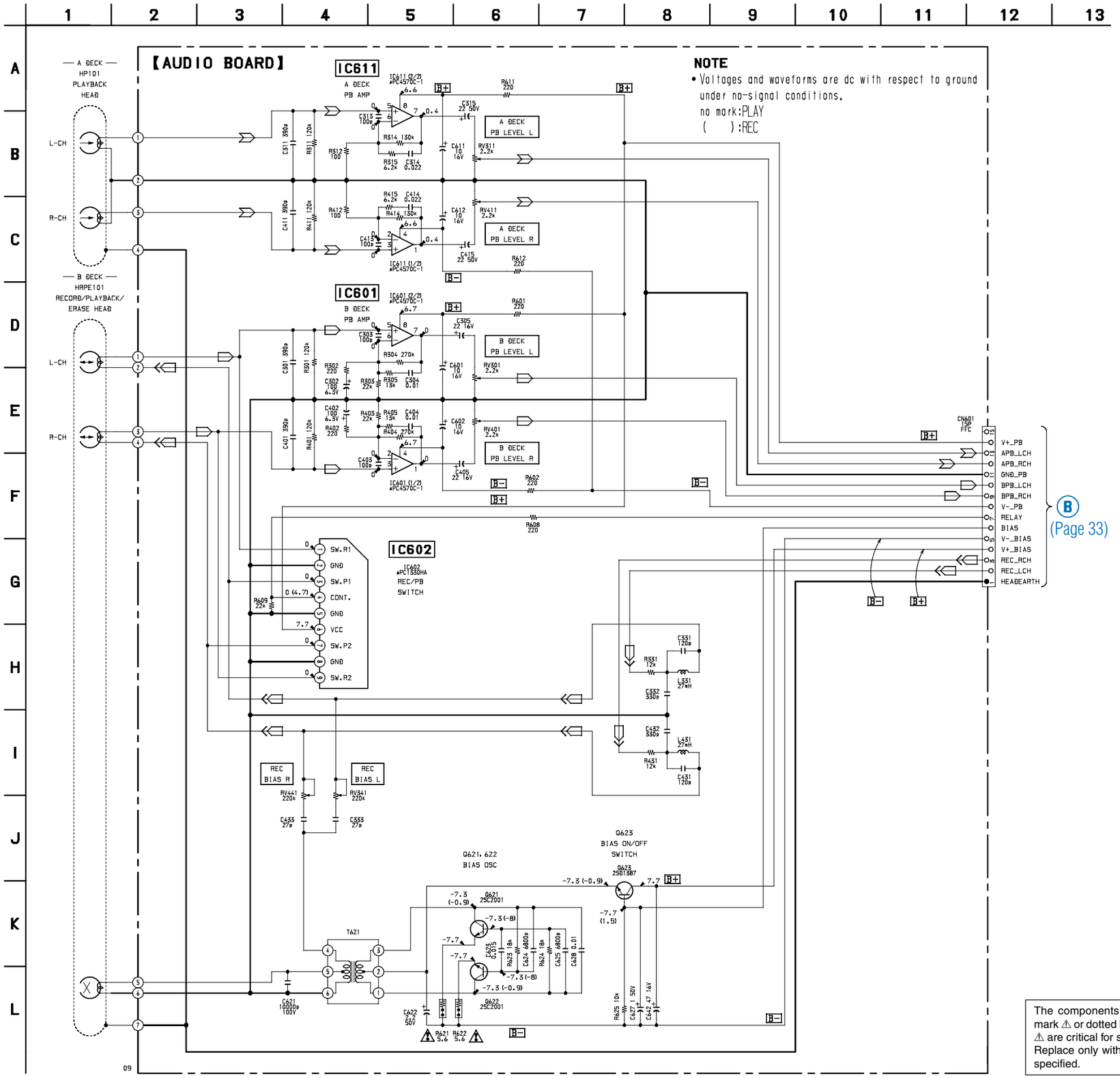


The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

6-5. PRINTED WIRING BOARD – DECK SECTION – • See page 23 for Circuit Boards Location.



6-6. SCHEMATIC DIAGRAM – DECK SECTION –



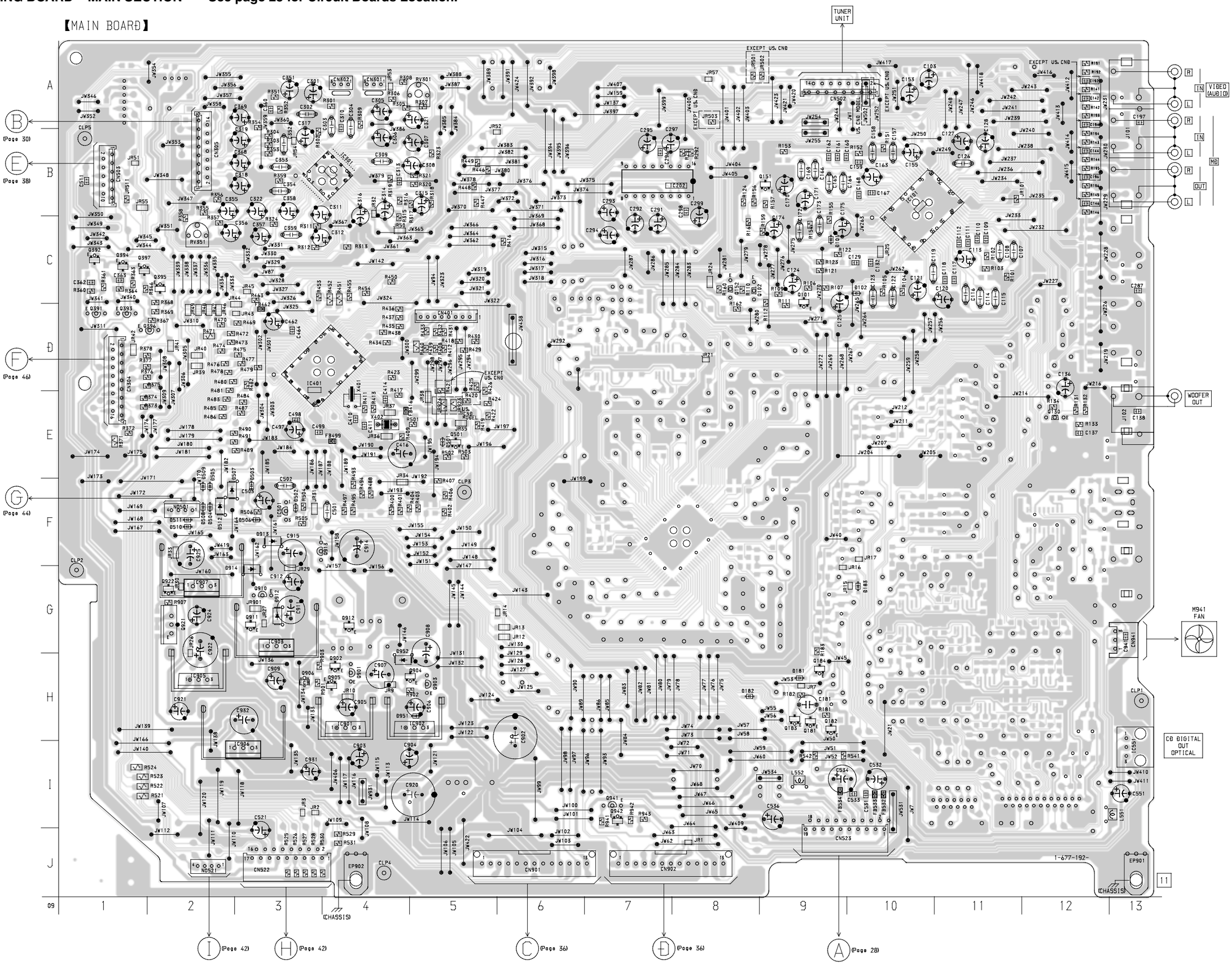
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

6-7. PRINTED WIRING BOARD – MAIN SECTION – • See page 23 for Circuit Boards Location.

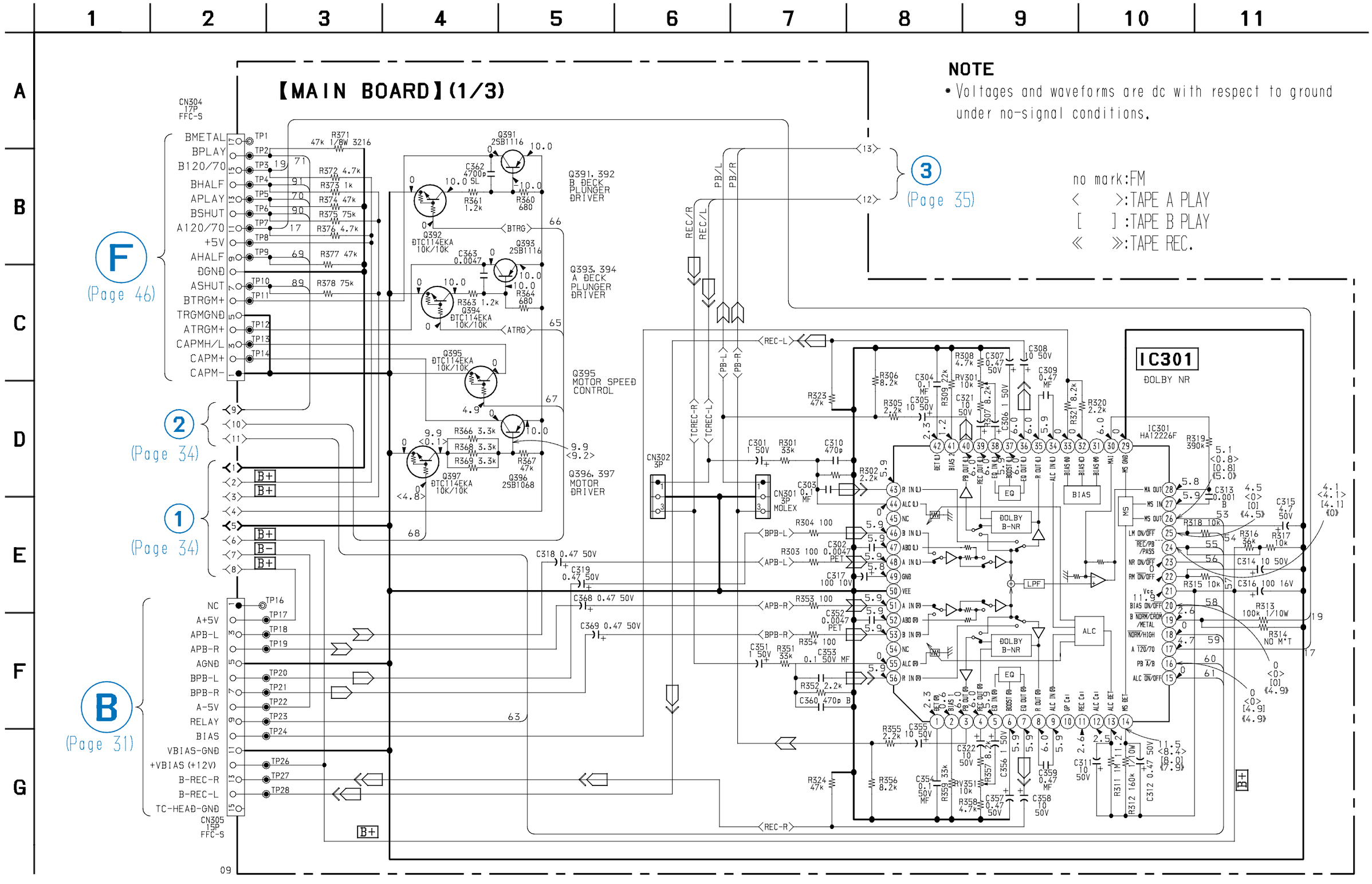
【MAIN BOARD】

• **Semiconductor Location**

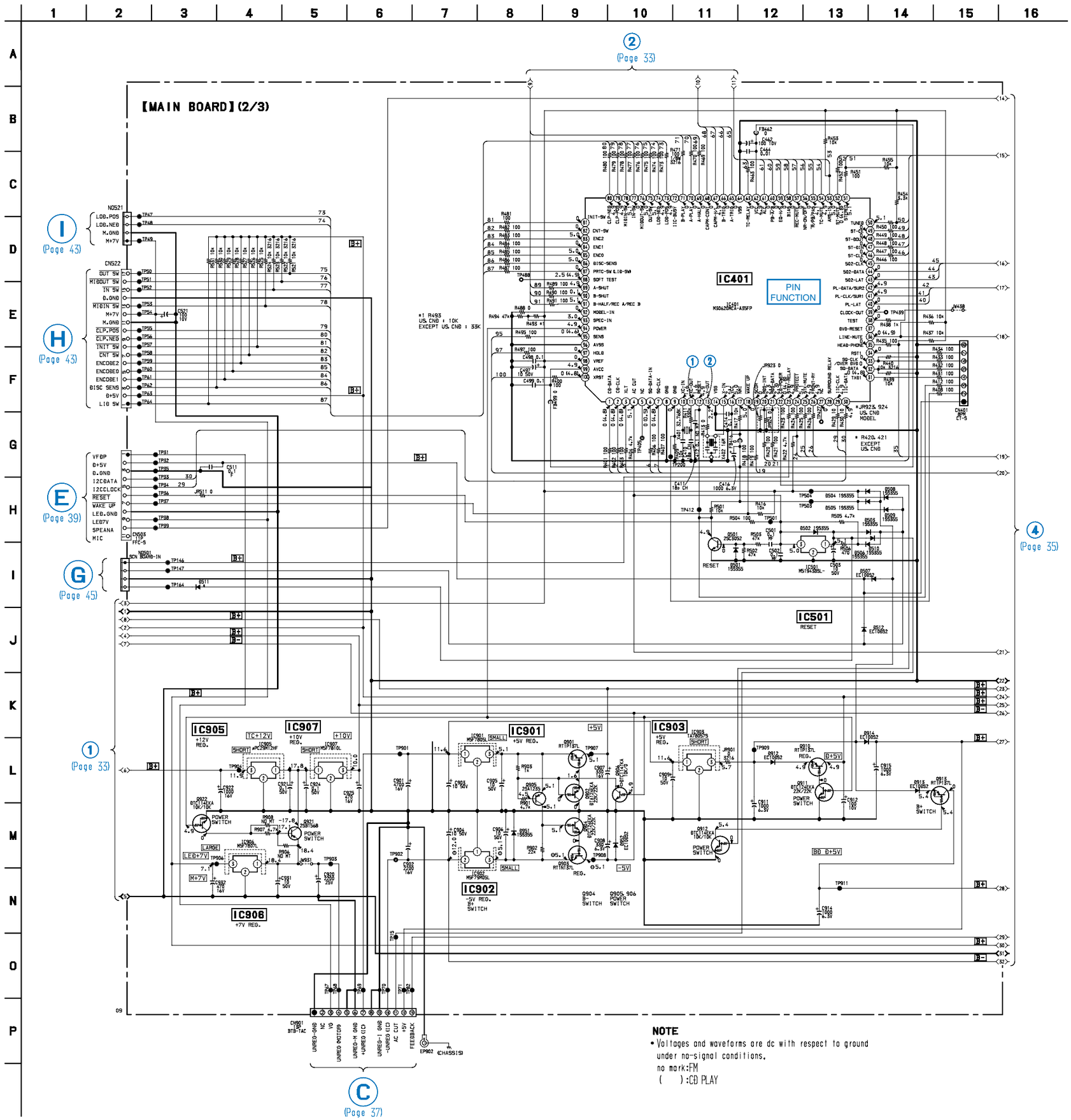
Ref. No.	Location
D101	C-9
D102	C-10
D181	H-9
D182	H-8
D183	G-10
D501	E-5
D502	F-3
D503	F-3
D504	F-2
D505	F-2
D506	F-3
D507	F-2
D508	F-2
D509	F-2
D510	F-2
D511	F-2
D512	F-2
D912	G-3
D913	F-3
D914	G-3
D951	H-5
D952	H-4
IC101	B-10
IC202	B-8
IC301	B-3
IC401	D-3
IC501	F-3
IC551	I-12
IC901	H-4
IC902	H-5
IC903	G-3
IC905	H-2
IC906	I-3
IC907	G-2
Q101	C-9
Q102	C-8
Q130	E-12
Q151	B-8
Q152	C-8
Q181	H-9
Q182	H-9
Q183	H-9
Q184	H-9
Q391	C-1
Q392	D-1
Q393	D-1
Q394	C-1
Q395	C-2
Q396	D-2
Q397	C-2
Q501	E-5
Q901	H-4
Q902	H-4
Q903	H-5
Q904	H-5
Q905	H-4
Q906	H-3
Q910	G-3
Q911	G-3
Q912	G-3
Q913	F-4
Q921	G-2
Q922	G-2
Q941	I-7
Q942	I-7



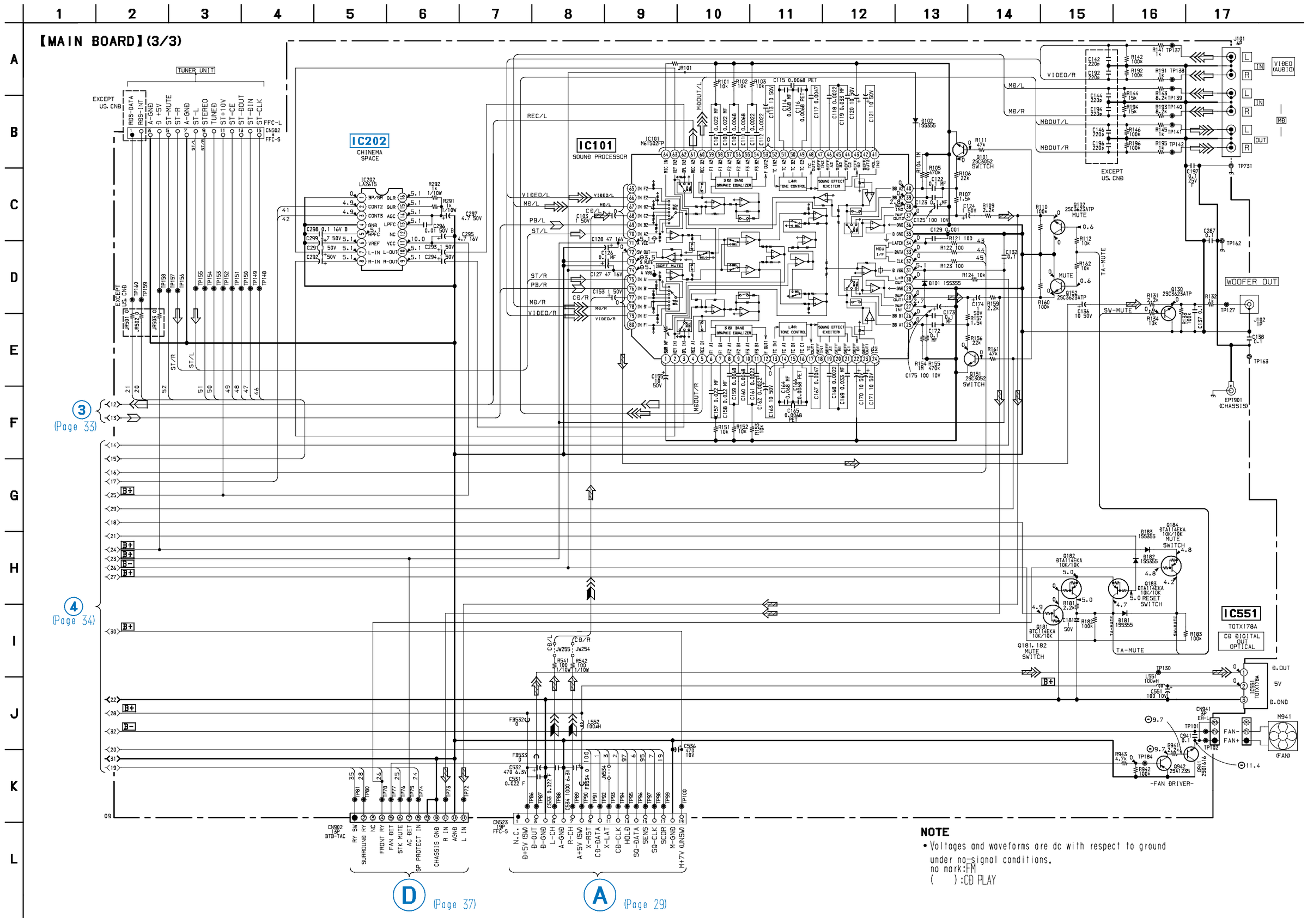
6-8. SCHEMATIC DIAGRAM – MAIN (1/3) SECTION –



6-9. SCHEMATIC DIAGRAM – MAIN (2/3) SECTION – • See page 27 for Waveforms. • See page 50 for IC Pin Functions. • See page 32 for Printed Wiring Board.



6-10. SCHEMATIC DIAGRAM – MAIN (3/3) SECTION – • See page 48 for IC Block Diagrams. • See page 32 for Printed Wiring Board.



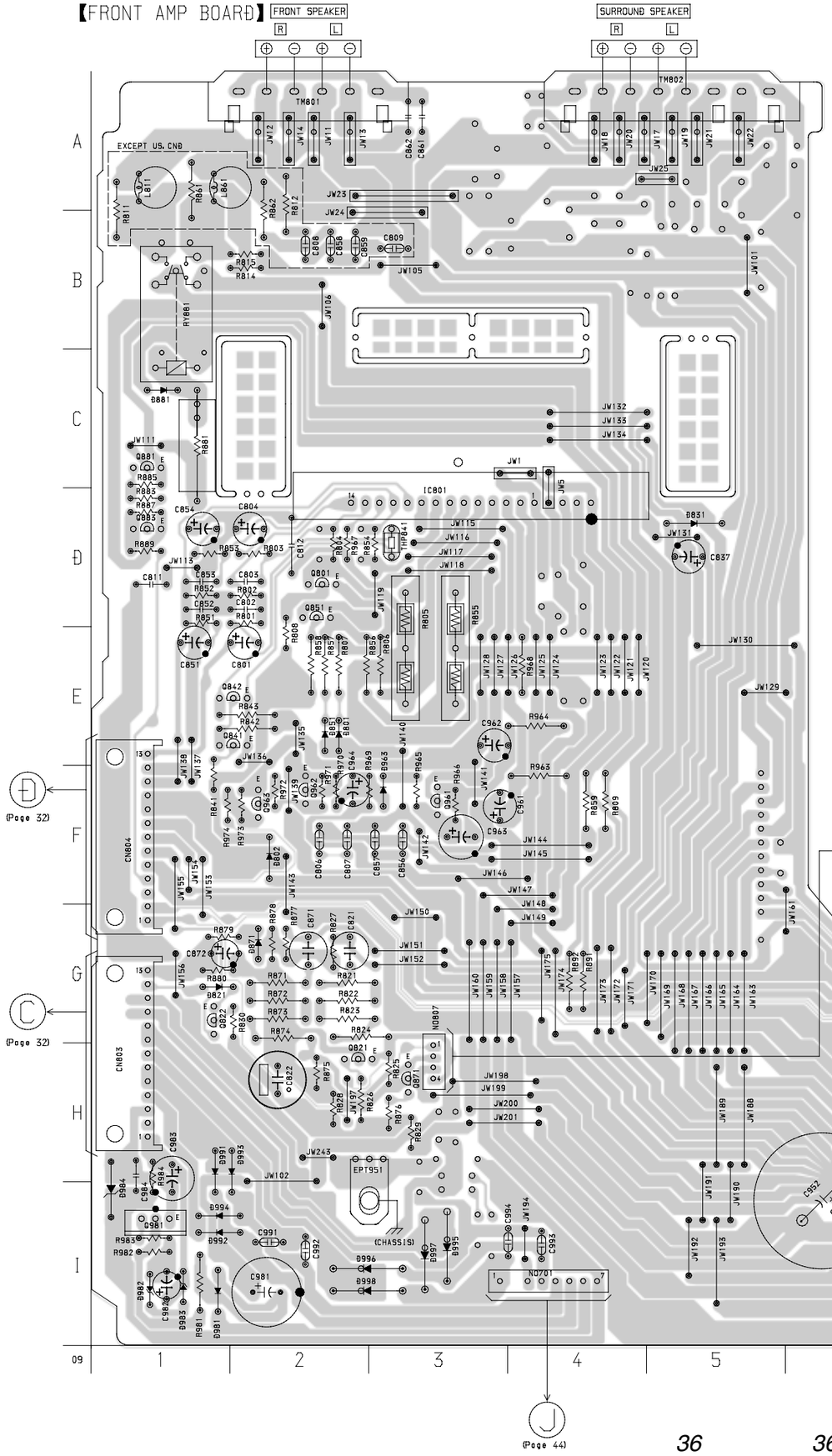
NOTE

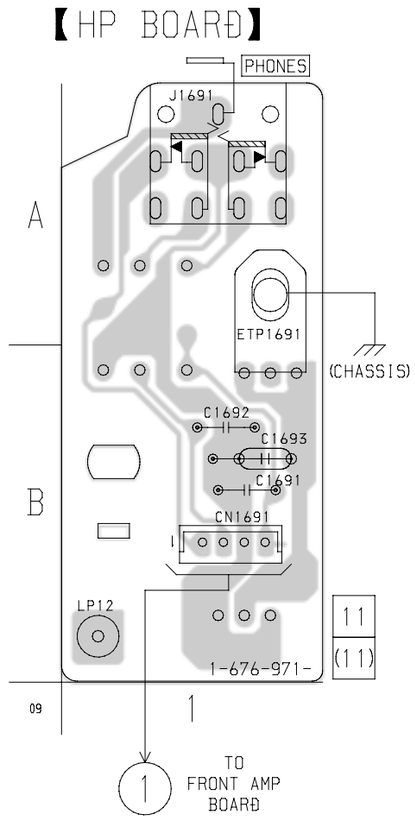
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark:FM
  ( ):CD PLAY

6-11. PRINTED WIRING BOARD – AMP SECTION – • See page 23 for Circuit Boards Location.

• **Semiconductor Location**

Ref. No.	Location
D801	E-2
D802	F-2
D821	G-1
D831	D-5
D851	E-2
D871	G-2
D881	C-1
D911	G-8
D963	F-3
D981	I-1
D982	I-1
D983	I-1
D984	I-1
D991	I-1
D992	I-1
D993	I-1
D994	I-1
D995	I-3
D996	I-2
D997	I-3
D998	I-2
IC801	D-3
Q801	D-2
Q821	H-2
Q822	G-1
Q841	E-2
Q842	E-2
Q851	D-2
Q871	H-3
Q881	C-1
Q883	D-1
Q891	G-7
Q892	G-7
Q893	G-8
Q894	G-8
Q895	G-9
Q896	G-9
Q897	G-8
Q961	F-3
Q962	F-2
Q963	F-2
Q981	I-1





6-12. SCHEMATIC DIAGRAM – AMP SECTION –

【FRONT AMP BOARD】

IC801
POWER AMP
IC801
STK442-120

CH2 CH1

CN803
PRE GND
NC
VG
UNREG (MOTOR)
UNREG-M GND
UNREG-M GND
+UNREG (IC)
UNREG-I GND
UNREG-I GND
-UNREG (IC)
NC
+5V
FEEDBACK

C (Page 34)

CN804
L IN
AGND
R IN
CHASSIS GND
CHASSIS GND
SP PROTECT IN
AC DET
STK MUTE
FAN DET
FRONT RY
NC
SURROUND RY
RY SW

D (Page 35)

NO701
CT
AC5
AC4
AC4
AC3
GND
AC3

J (Page 45)

CN801
AC1
AC1
GND
GND

K (Page 45)

*1

	US	EXCEPT US
C951	3300 71V	3300 63V
C952		

*2

	US, CND	EXCEPT US, CND
C801	4.7 100V	4.7 50V
C851		

*3

	US	EXCEPT US
R803	560	680
R853		

Q841, 842 OVERHEAT DETECT
Q962, 963 MUTE SWITCH
MUTE CONTROL
Q839 LATCH DRIVER
Q891, 892 PROTECT DC AMP
Q894-897 PROTECT SWITCH
Q881, 883 RELAY DRIVER
Q812, 871 MUTE

RY881
TM801
TM802
FRONT SPEAKER
SURROUND SPEAKER

【HP BOARD】
CN1691
RY-OFF
HP R-CH
HP GND
HP L-CH
J1691
PHONES

NOTE

- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark:FM

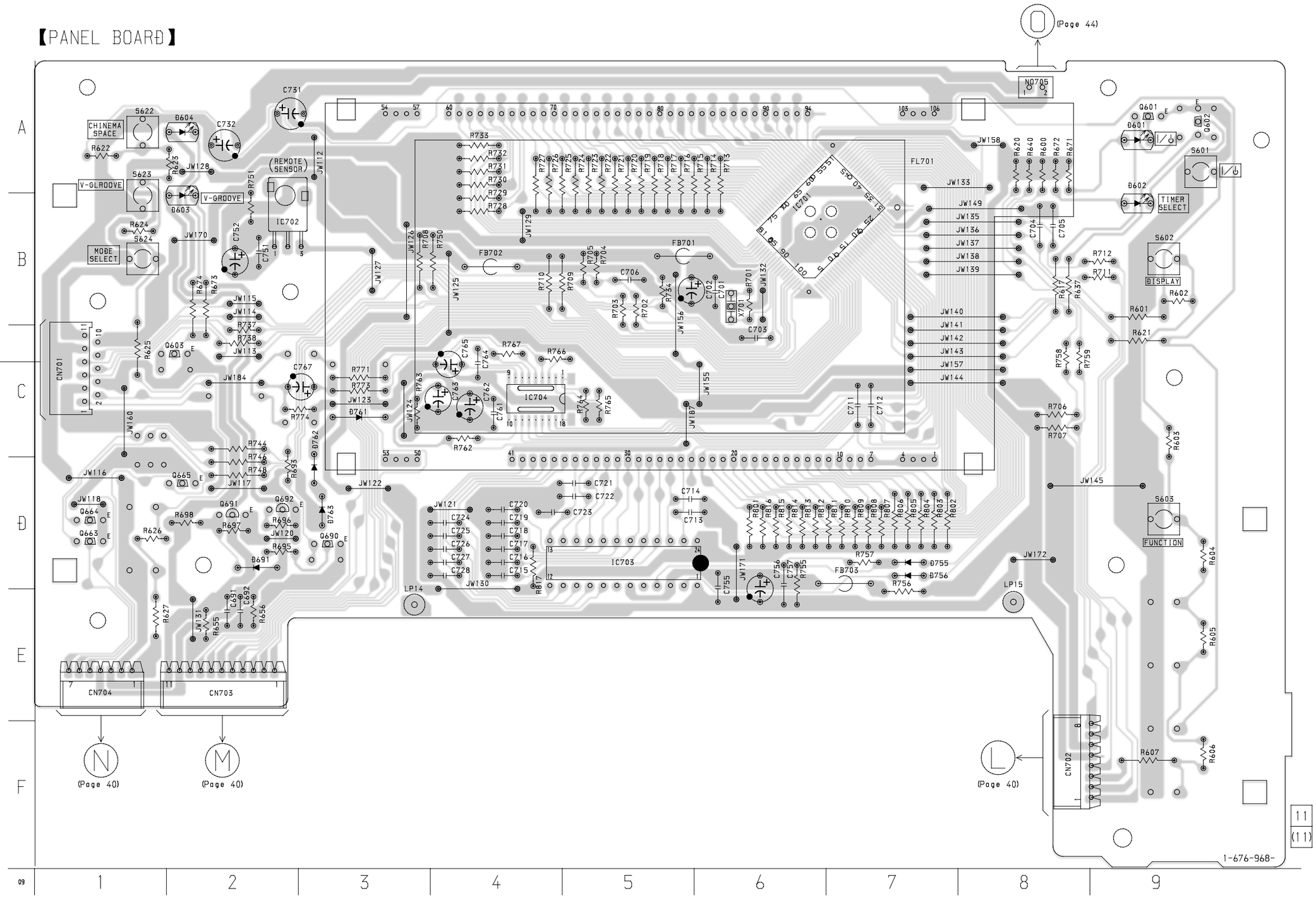
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

6-13. PRINTED WIRING BOARD – PANEL SECTION – • See page 23 for Circuit Boards Location.

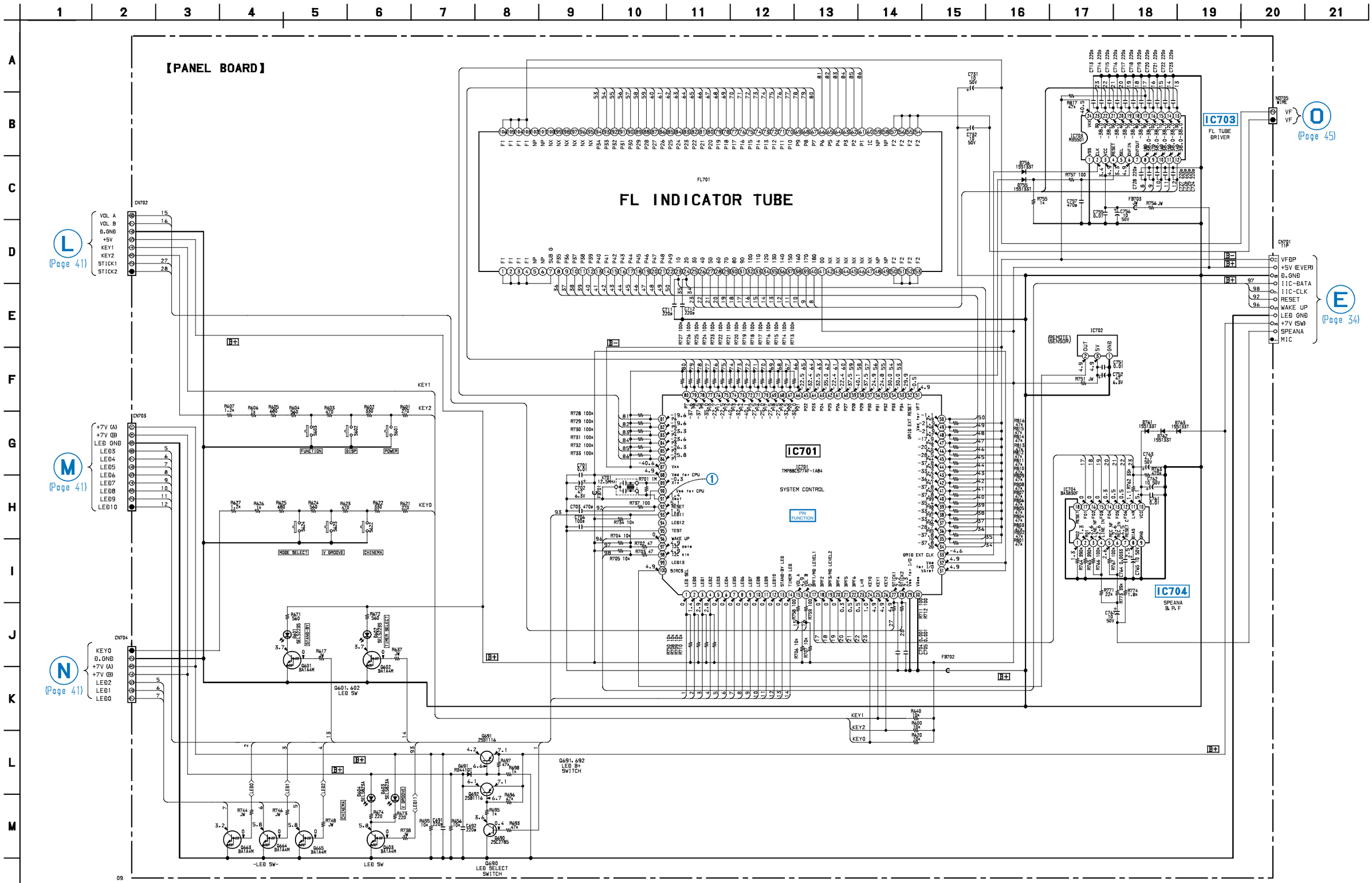
• **Semiconductor Location**

Ref. No.	Location
D601	A-9
D602	A-9
D603	B-2
D604	A-2
D691	D-2
D755	D-7
D756	D-7
D761	C-3
D762	D-3
D763	D-3
IC701	A-6
IC702	A-2
IC703	D-5
IC704	C-4
Q601	A-9
Q602	A-9
Q603	C-2
Q663	D-1
Q664	D-1
Q665	D-2
Q690	D-3
Q691	D-2
Q692	D-2

【PANEL BOARD】



6-14. SCHEMATIC DIAGRAM – PANEL SECTION – • See page 27 for Waveforms. • See page 49 for IC Block Diagrams. • See page 53 for IC Pin Functions.



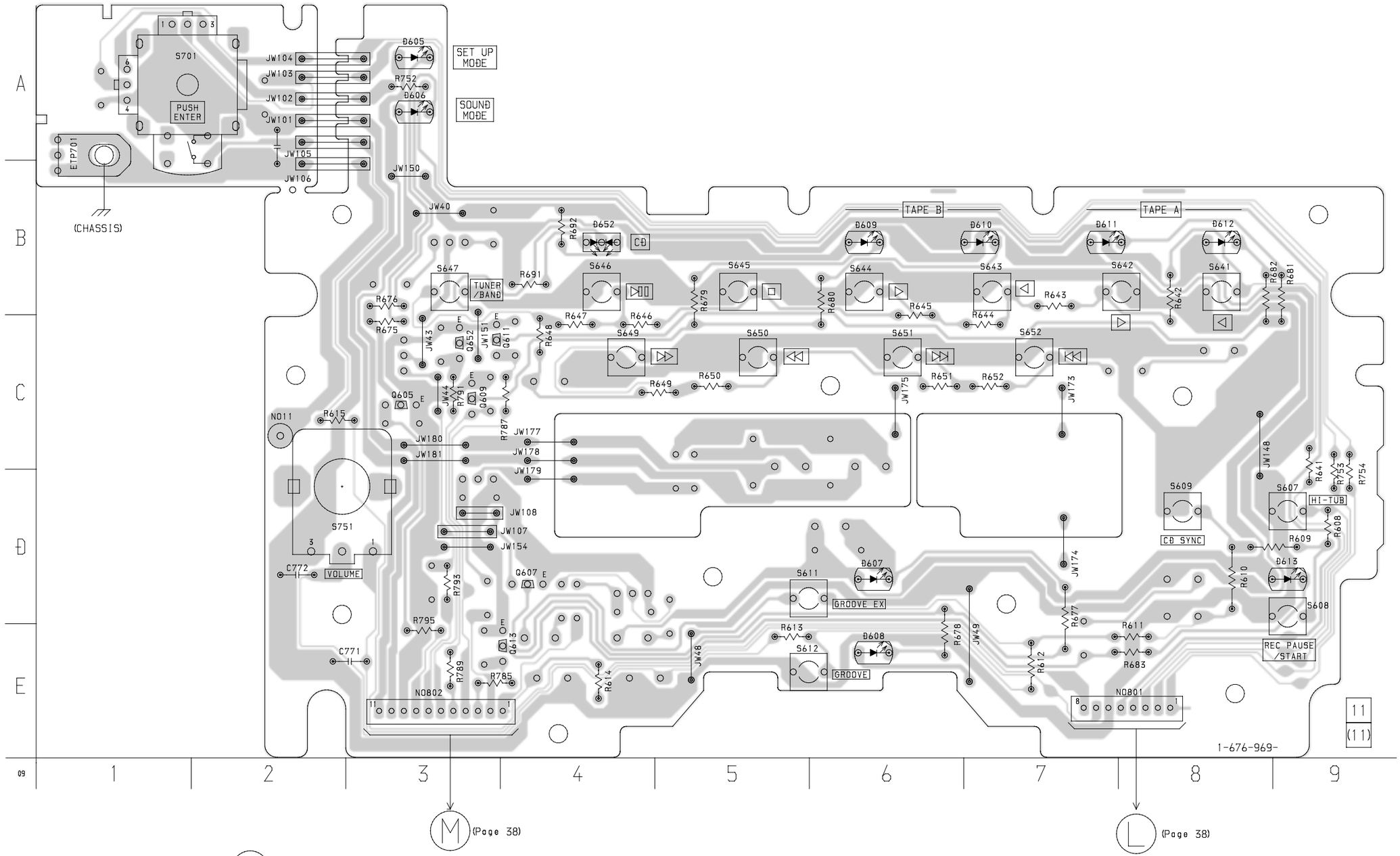
NOTE

- Voltages and waveforms are dc with respect to ground under no-signal conditions.

no mark: FM

6-15. PRINTED WIRING BOARD – SWITCH SECTION – • See page 23 for Circuit Boards Location.

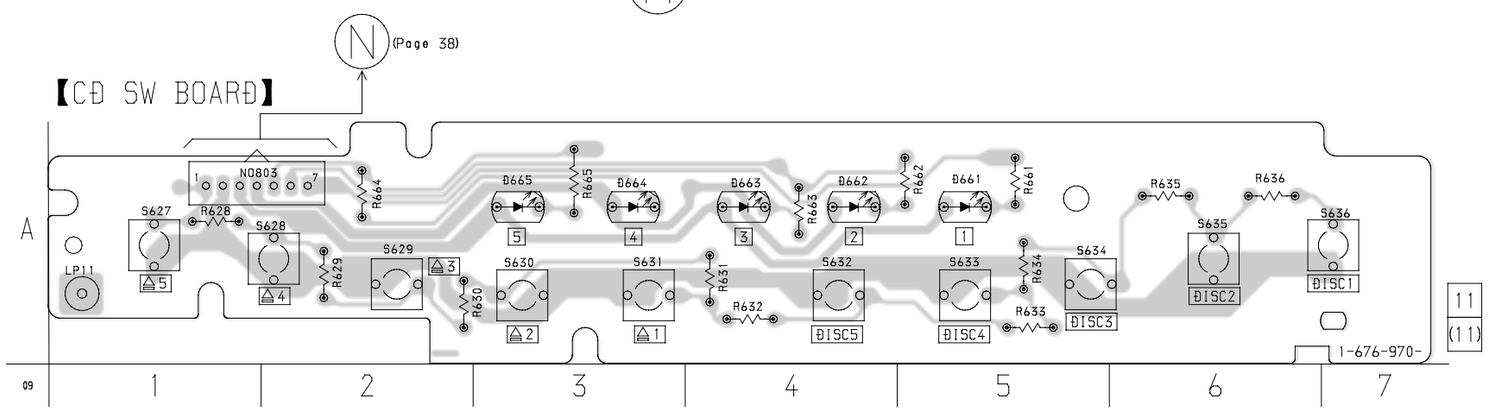
【SUB PANEL BOARD】



• **Semiconductor Location (SUB PANEL Board)**

Ref. No.	Location
D605	A-3
D606	A-3
D607	D-6
D608	E-6
D609	B-6
D610	B-7
D611	B-7
D612	B-8
D613	D-9
D652	B-4
Q605	C-3
Q607	D-4
Q609	C-3
Q611	C-3
Q613	E-4
Q652	C-3

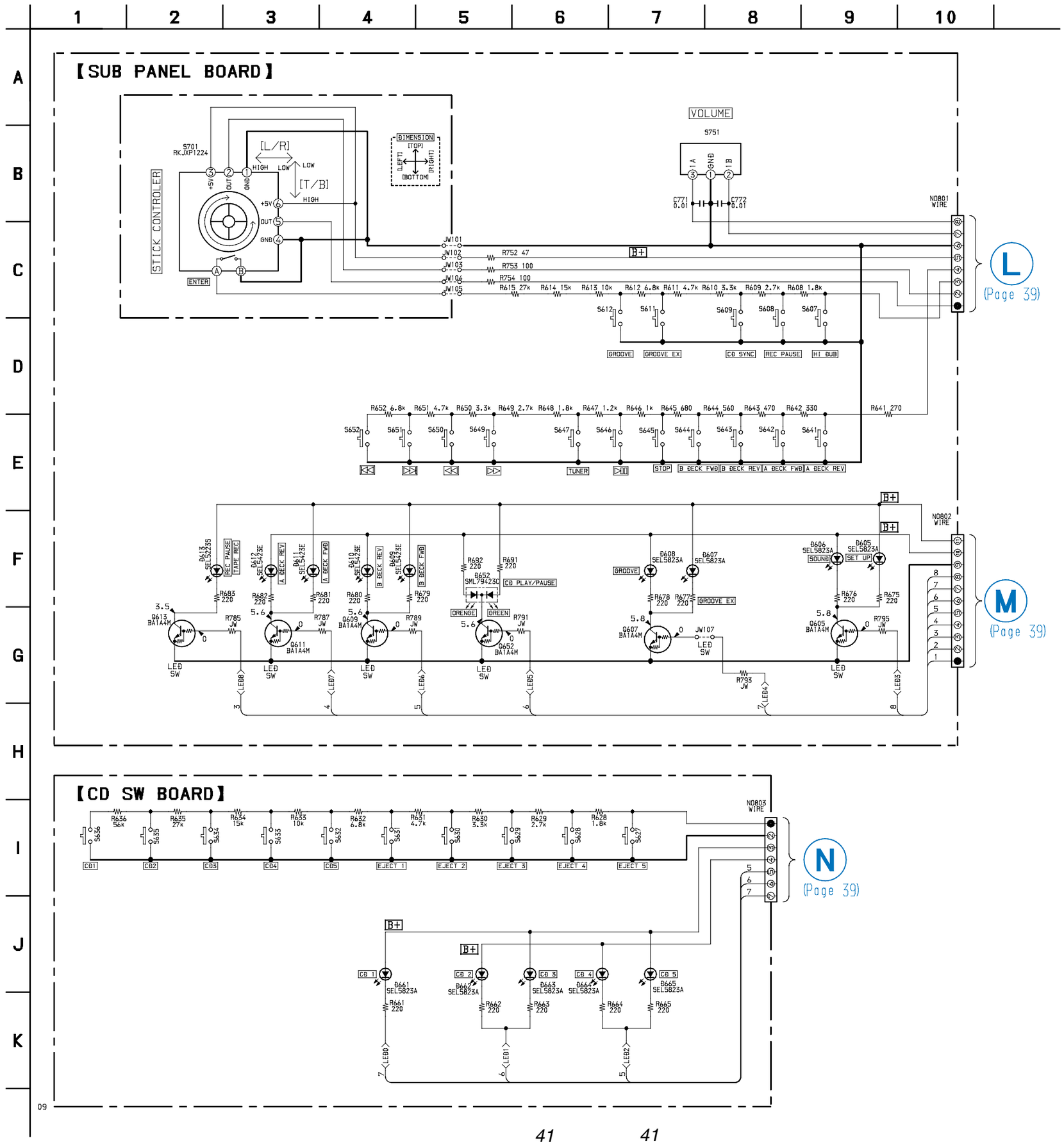
【CD SW BOARD】



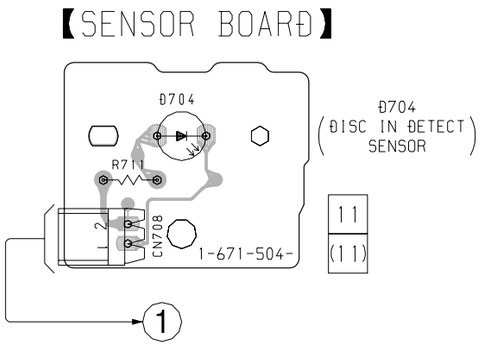
• **Semiconductor Location (CD SW Board)**

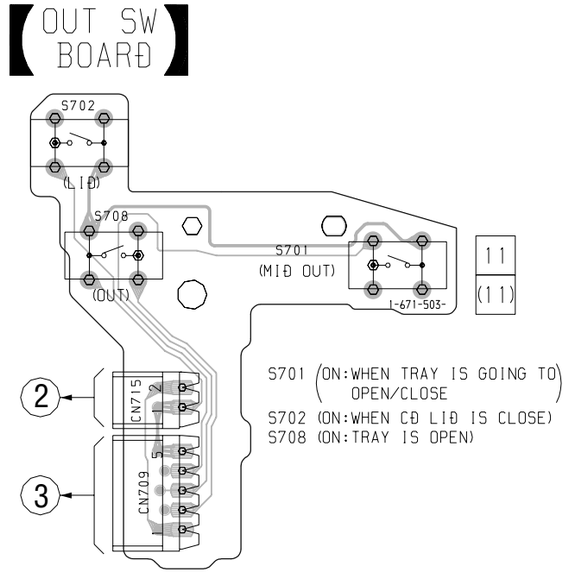
Ref. No.	Location
D661	A-5
D662	A-4
D663	A-4
D664	A-3
D665	A-3

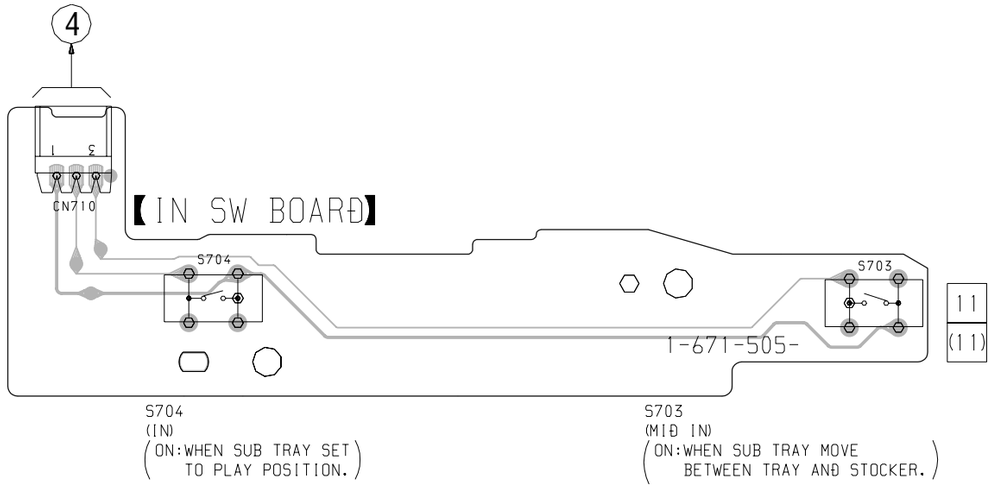
6-16. SCHEMATIC DIAGRAM – SWITCH SECTION –

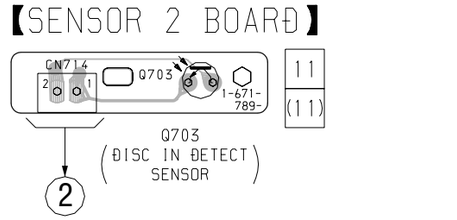


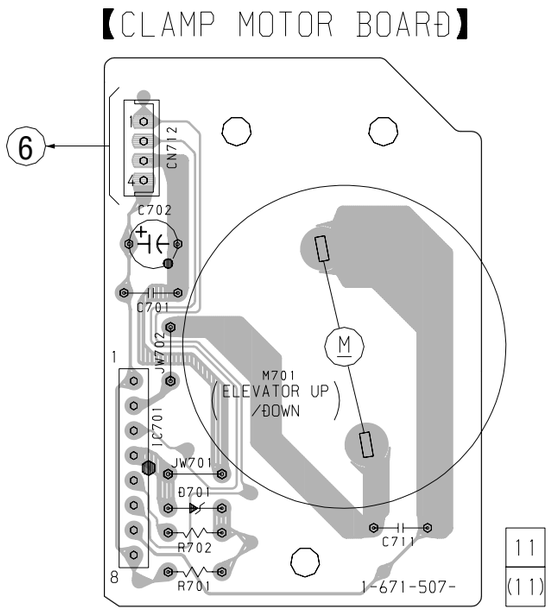
6-17. PRINTED WIRING BOARD – CD MECHANISM SECTION – • See page 23 for Circuit Boards Location.

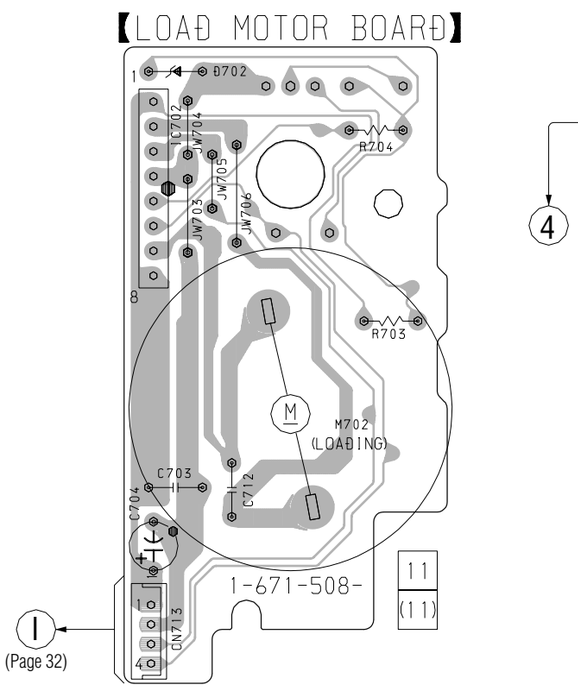


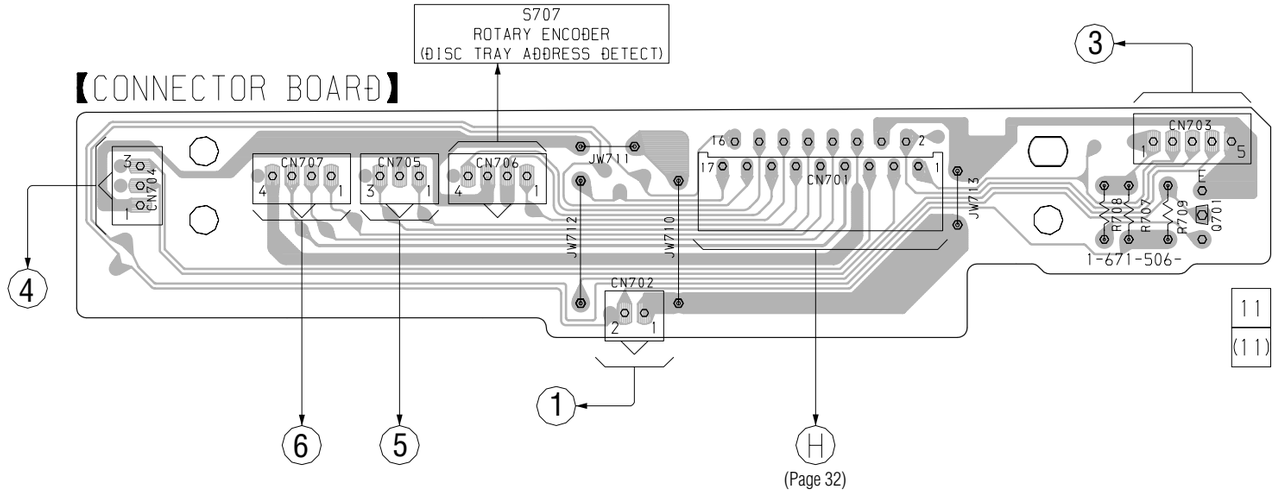


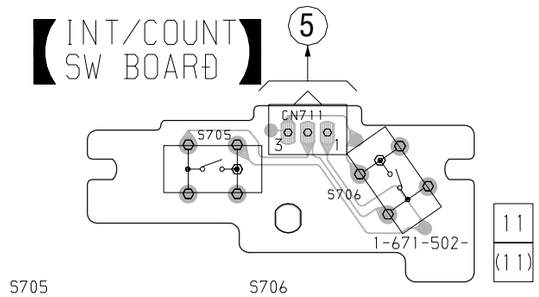








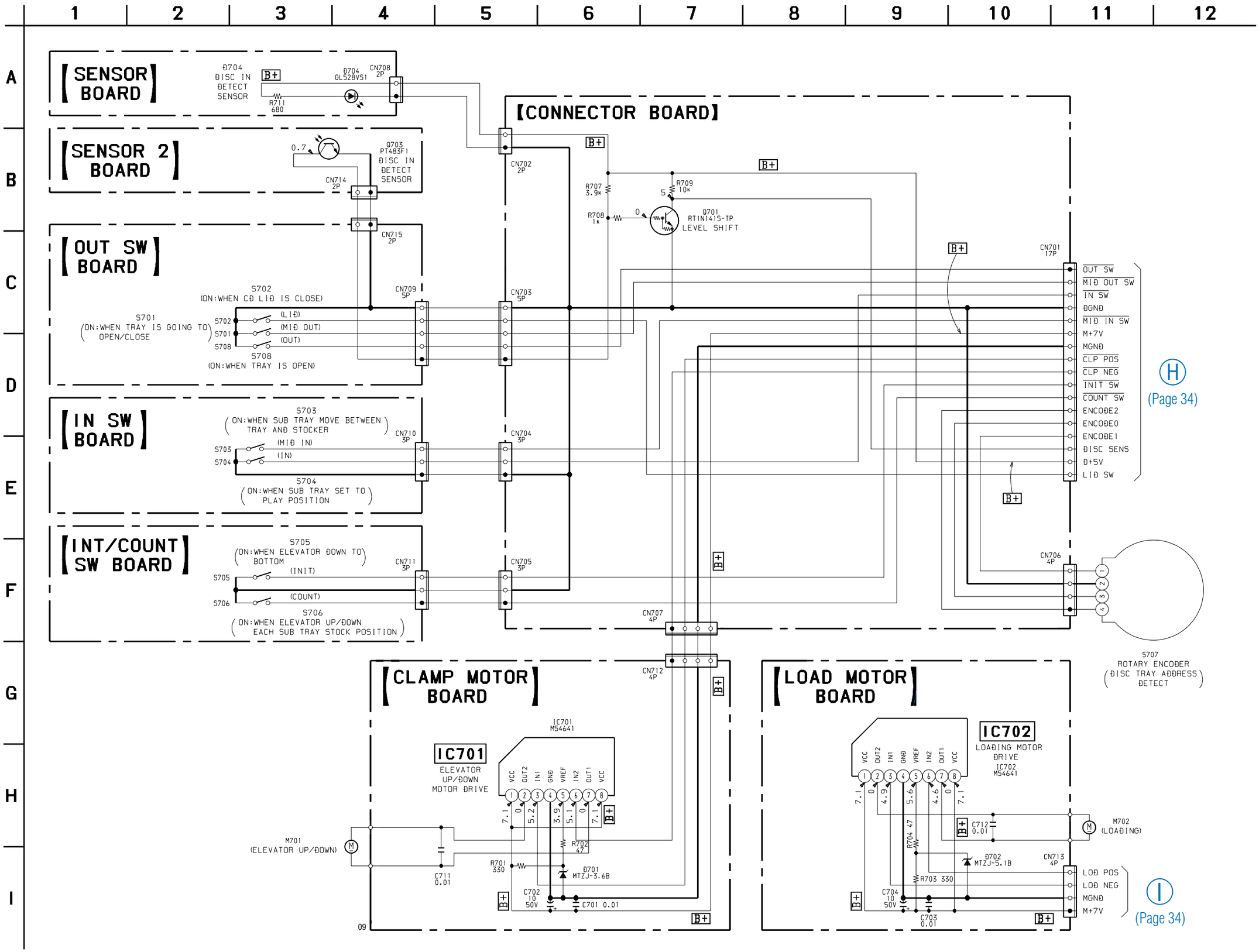




S705
(INIT)
(ON:WHEN ELEVATOR DOWN TO BOTTOM.)

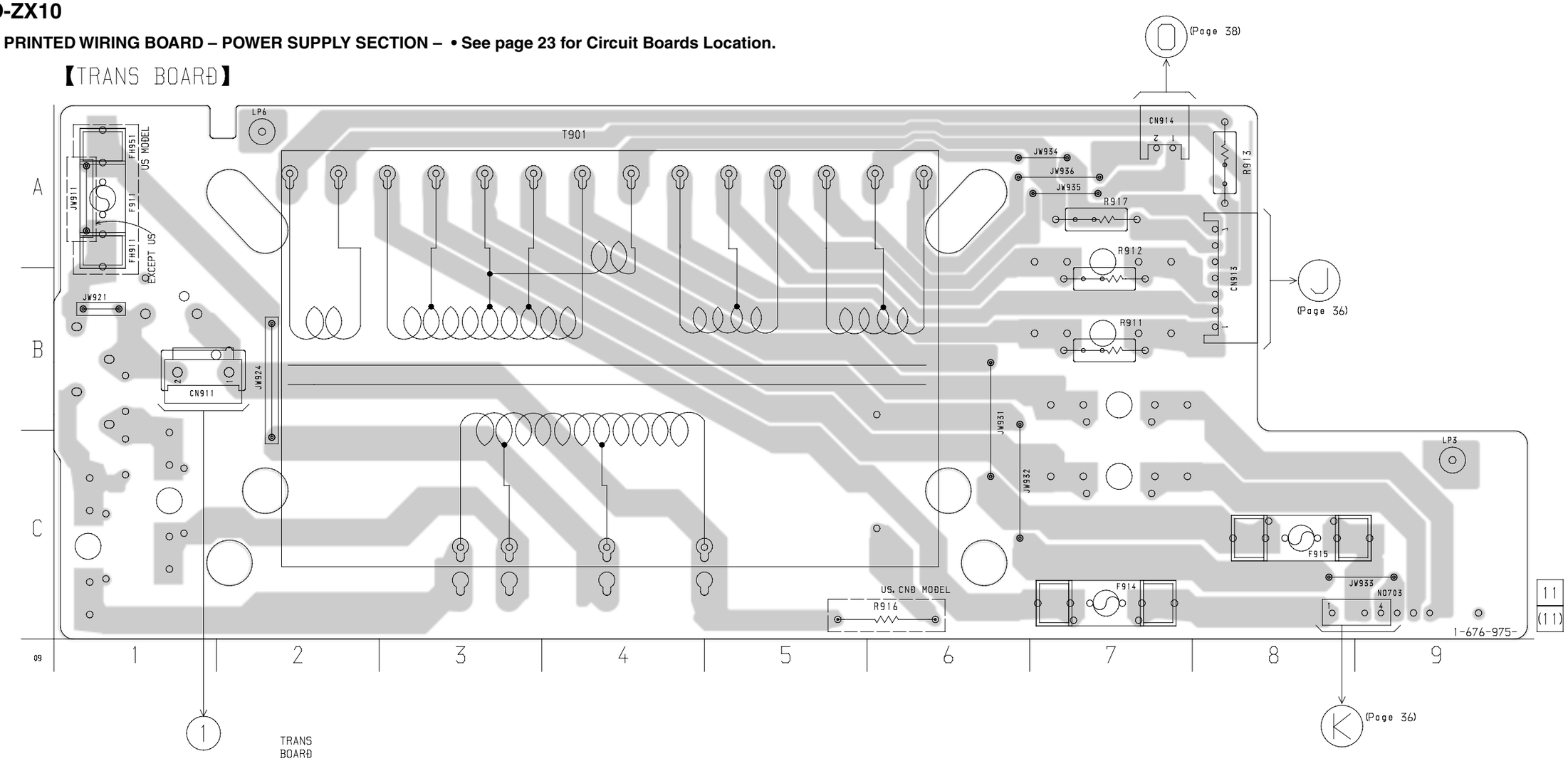
S706
(COUNT)
(ON:WHEN ELEVATOR UP/DOWN EACH SUB TRAY STOCK POSITION.)

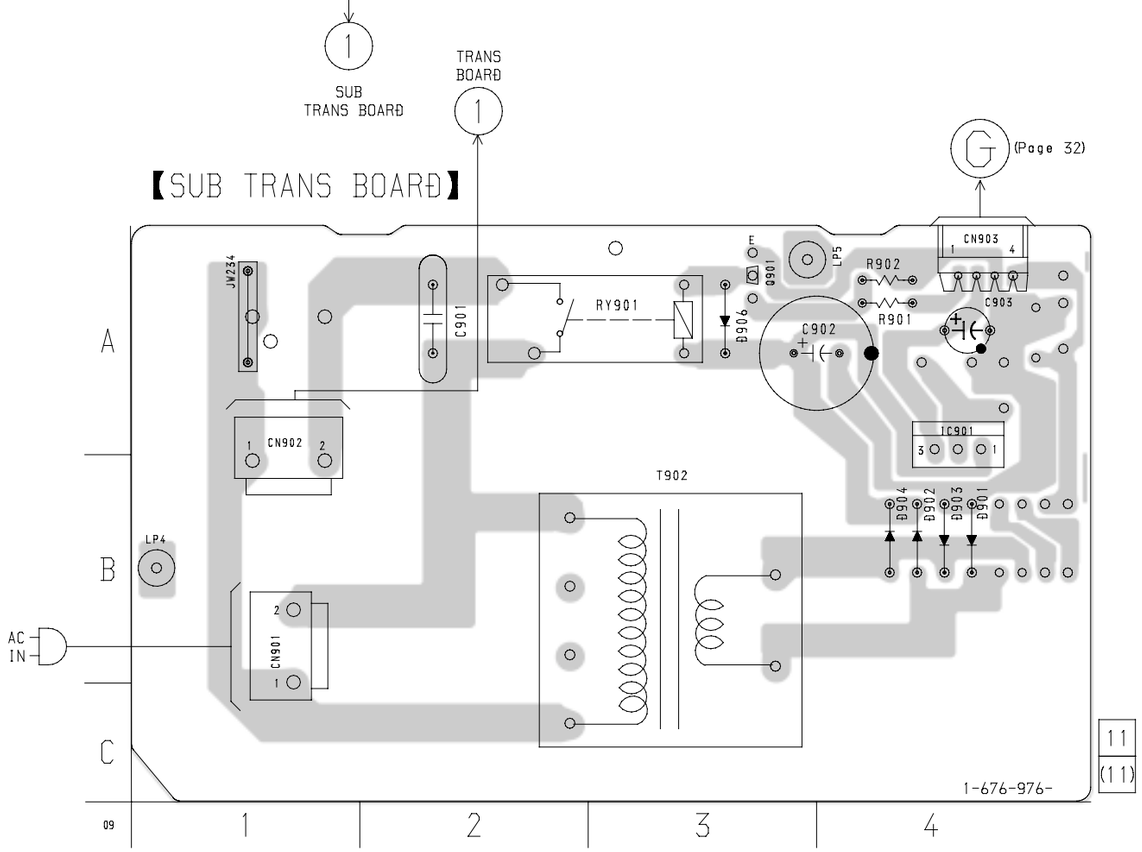
6-18. SCHEMATIC DIAGRAM – CD MECHANISM SECTION –



6-19. PRINTED WIRING BOARD – POWER SUPPLY SECTION – • See page 23 for Circuit Boards Location.

【TRANS BOARD】





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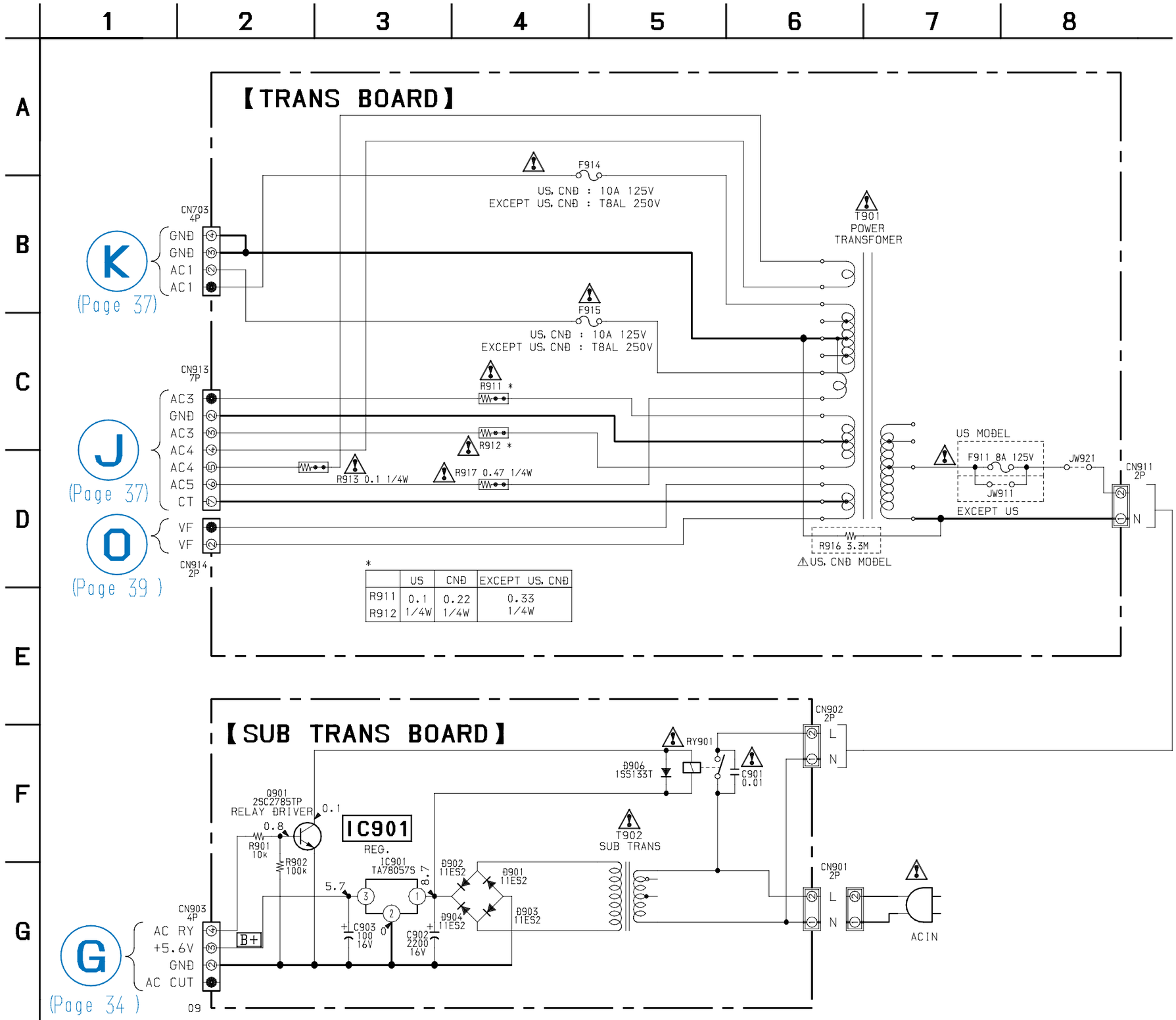
6-20. SCHEMATIC DIAGRAM – POWER SUPPLY SECTION –



*

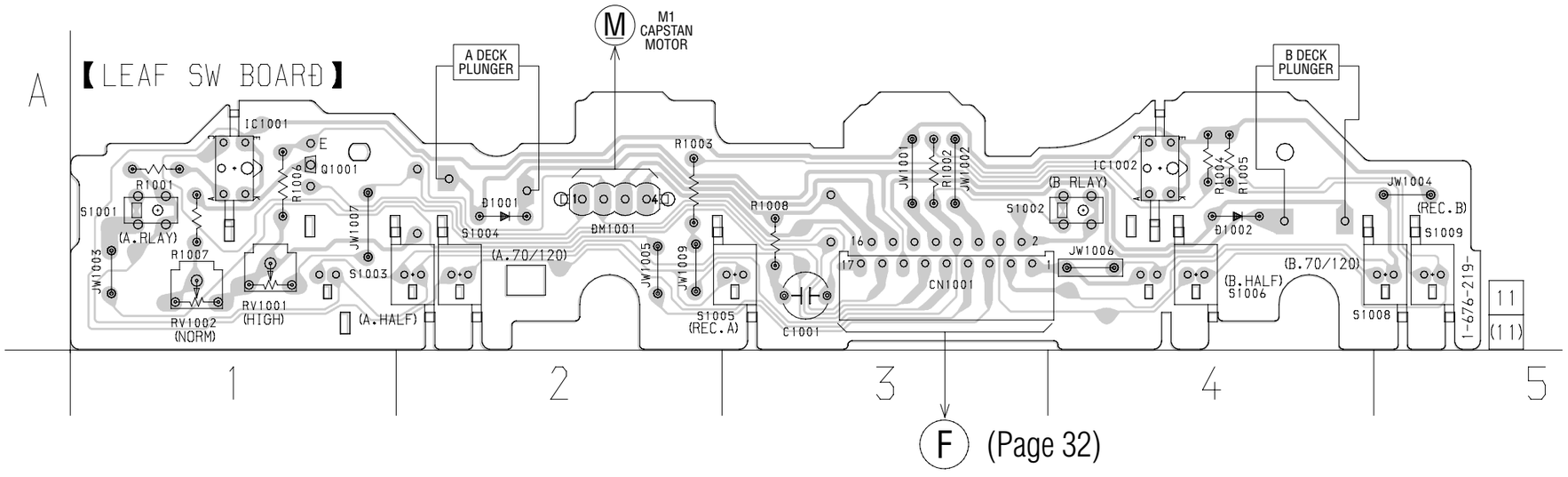
	US	CNÐ	EXCEPT US, CNÐ
R911	0.1 1/4W	0.22 1/4W	0.33 1/4W
R912			

NOTE

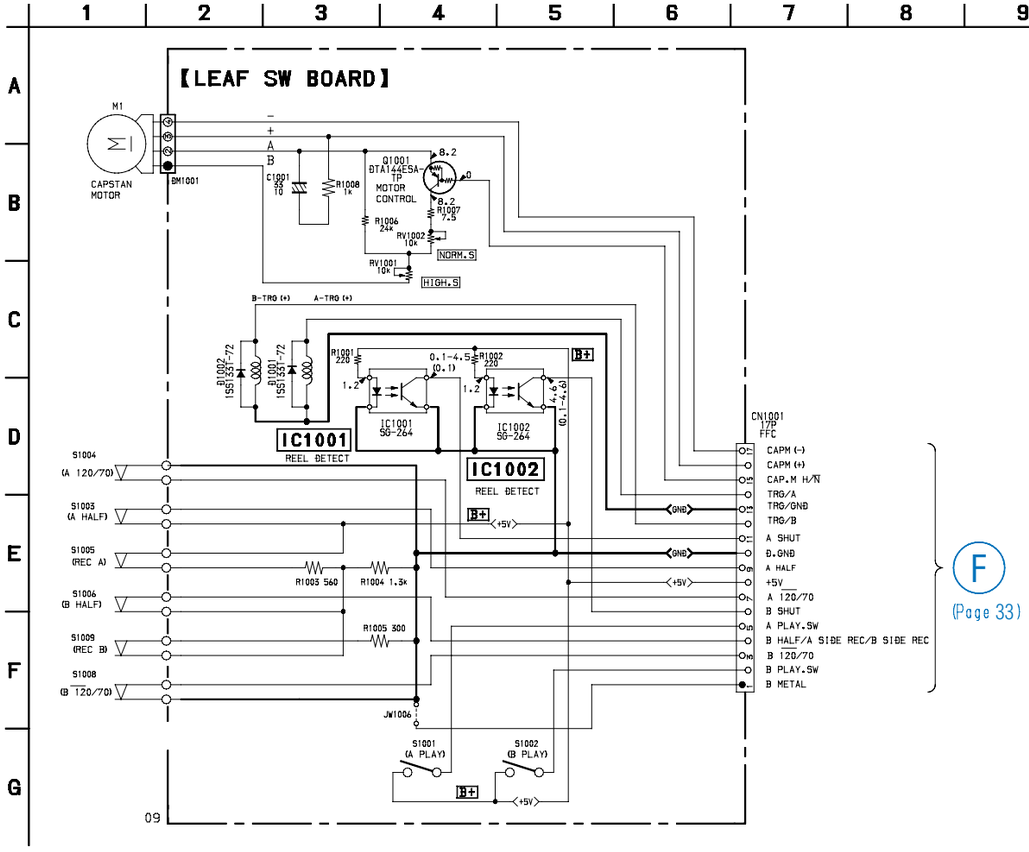
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark:STOP

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

6-21. PRINTED WIRING BOARD – LEAF SW SECTION – • See page 23 for Circuit Boards Location.

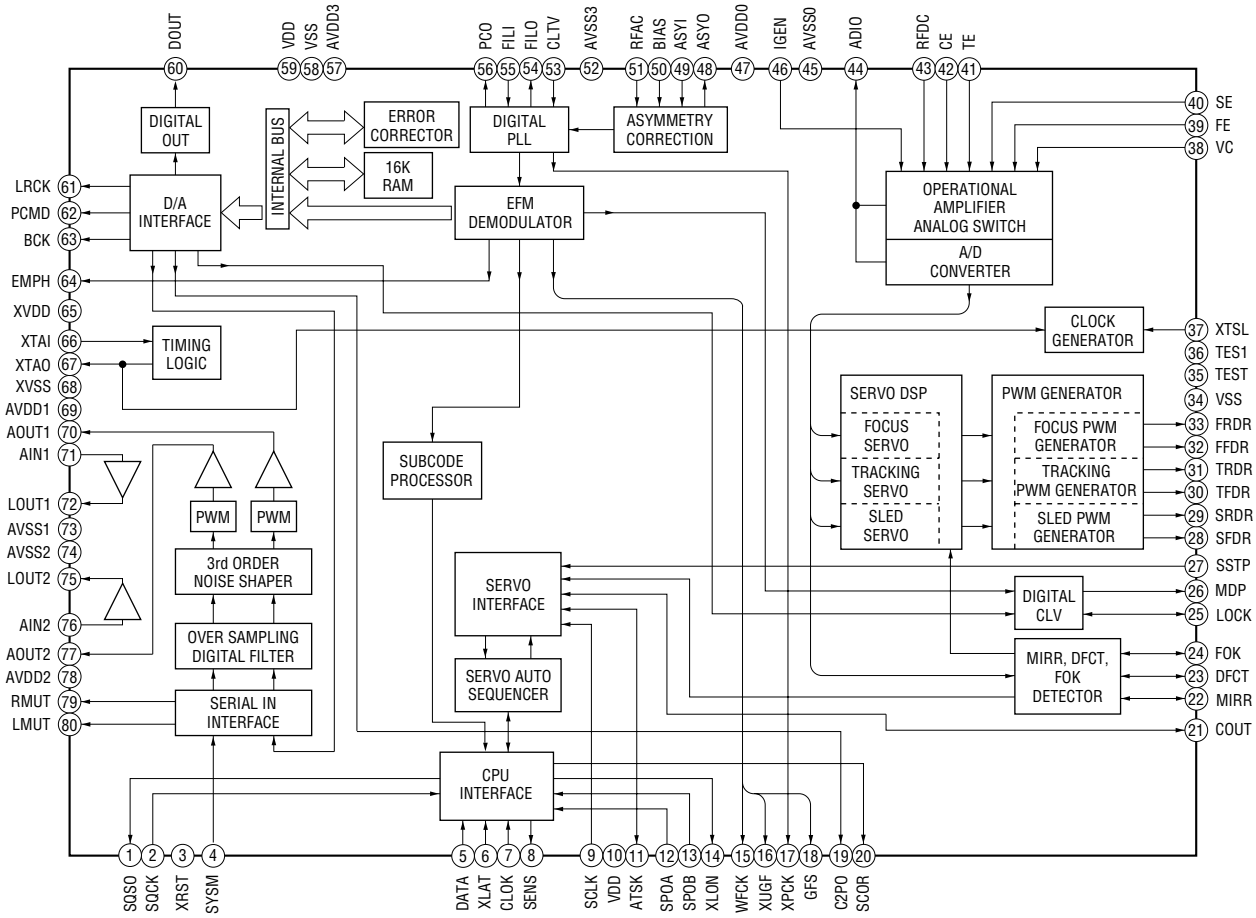


6-22. SCHEMATIC DIAGRAM – LEAF SW SECTION –

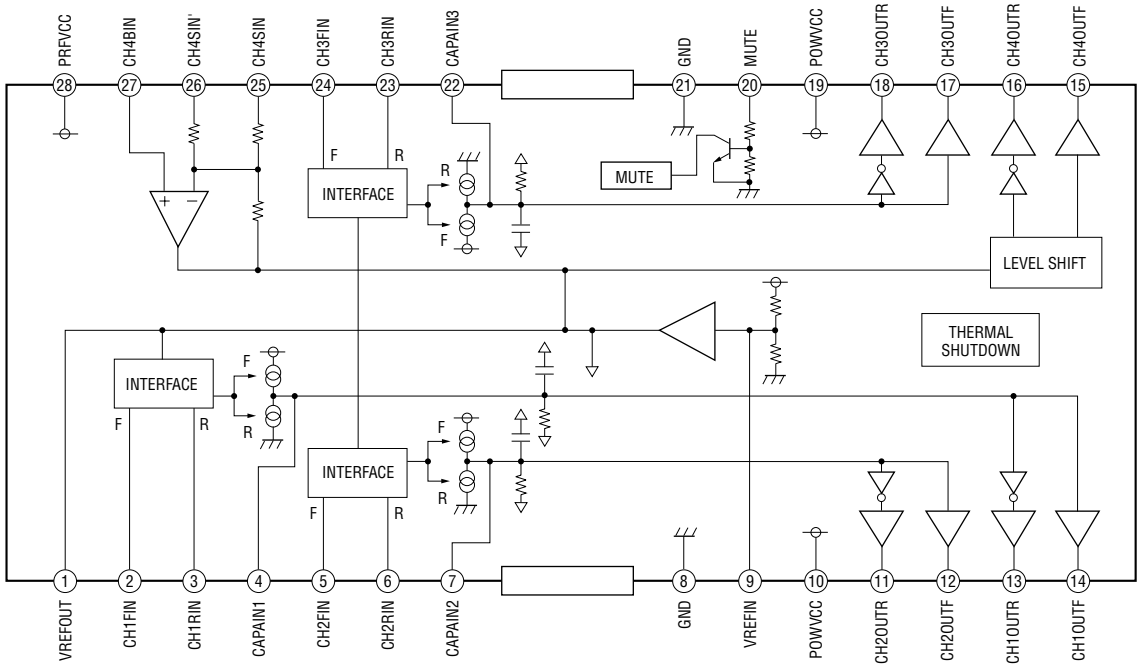


6-23. IC BLOCK DIAGRAMS

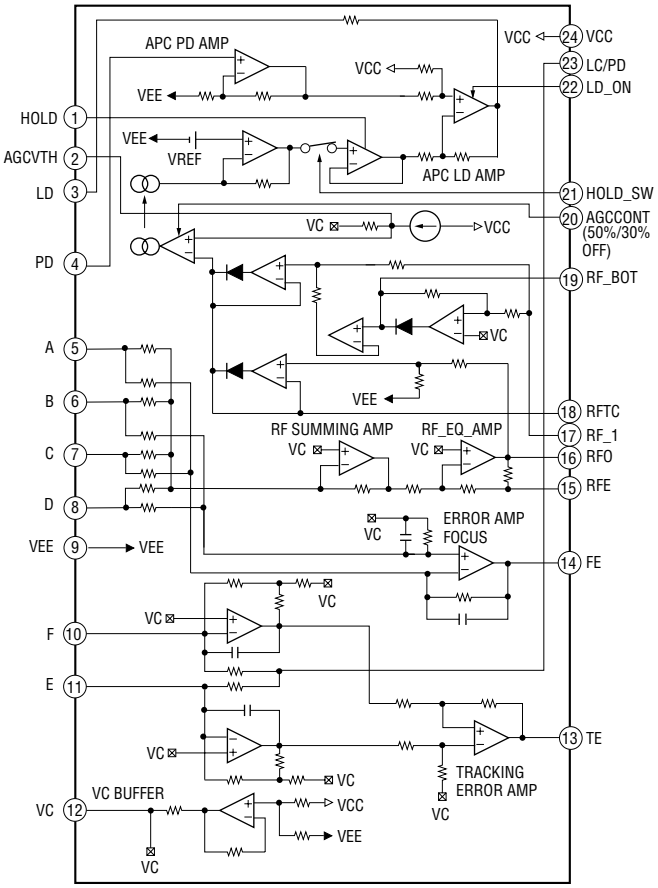
IC101 CXD2587Q (BD BOARD)



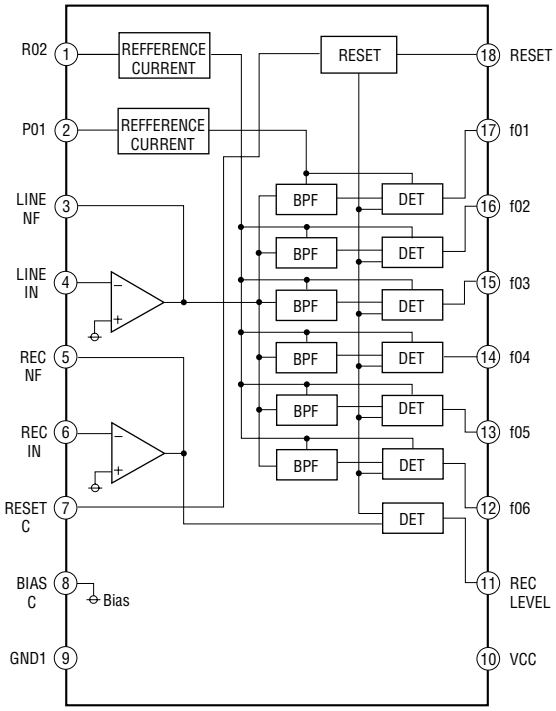
IC102 BA5974FP-E2 (BD BOARD)



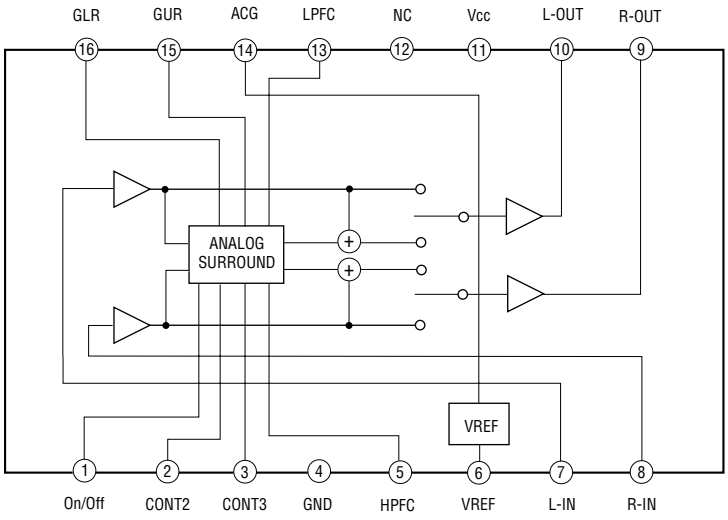
IC103 CXA2568M-T6 (BD BOARD)



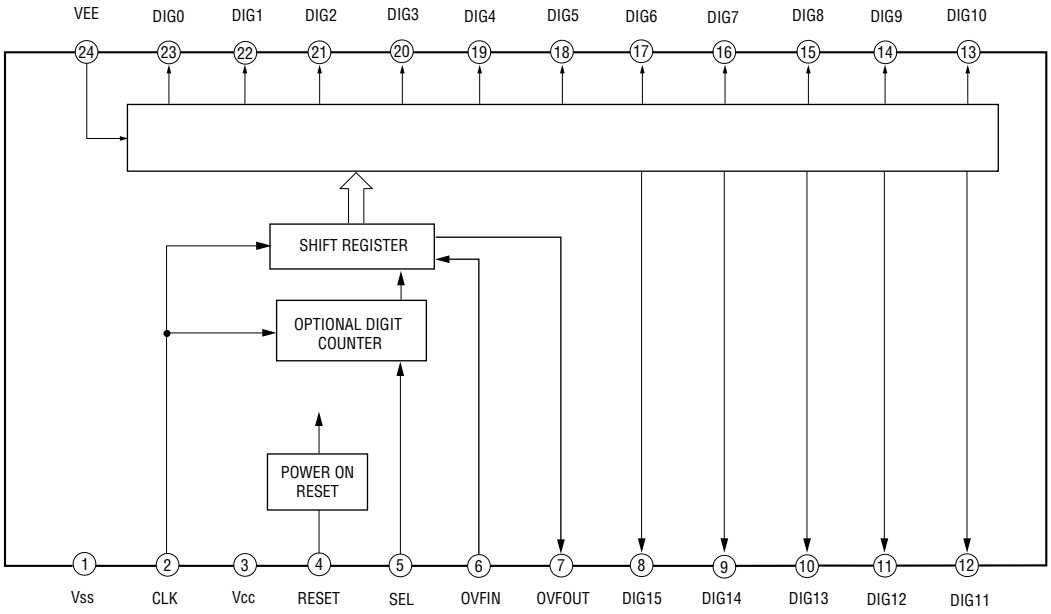
IC704 BA3830F (PANEL BOARD)



IC202 LA2615 (MAIN BOARD)



IC703 M35501P (PANEL BOARD)



6-24. IC PIN DESCRIPTIONS

• IC401 M30620MCA-A35FP MASTER CONTROL (MAIN BOARD)

Pin No.	Pin Name	I/O	Descriptions
1	CD-DATA IN	O	CD data output.
2	CD-CLK	O	CD clock output.
3	XLT	O	CD latch signal output.
4	AC-CUT	I	AC cut input. L= ON,H=OFF
5	N.C	—	Not used.
6	SQ-DATA	I	Subcode Q data input.
7	SQ-CLK	I	Subcode Q data input.
8	GND	—	Connected to ground.
9	GND	—	Connected to ground.
10	XC IN	I	SUB CLOCK input. (32.768kHz)
11	XC OUT	O	SUB CLOCK output. (32.768kHz)
12	RESET	I	System reset input.
13	X-OUT	O	MAIN SYSTEM CLOCK output. (16MHz)
14	VSS	—	Vss
15	X-IN	I	MAIN SYSTEM CLOCK input. (16MHz)
16	VCC	—	Power supply. (+5V)
17	NMI	I	PULL UP (EVER +5V)
18	$\overline{\text{WAKE\_UP}}$	I	WAKE UP signal input. (L)
19	SCOR	I	CD Q-data request signal input.
20	RDS-INT	I	RDS interrupt signal input.
21	RDS-DATA	I	RDS data signal input.
22	CD-POWER	O	CD-POWER ON/OFF signal output. H=ON, L=OFF
23	STBY-RELAY	O	STANDBY relay control signal output.
24	$\overline{\text{PROTECT}}$	I	Speaker protect signal input. L=ON, H=OFF
25	STK-MUTE	O	Power amplifier mute ON/OFF signal output. H=ON, L=OFF
26	FRONT-RELAY	O	Speaker terminal relay control signal output. H=ON, L=OFF
27	N.C	I	Not used.
28	SURROUND-RELAY	O	Rear speaker relay control signal output.(Not used.)
29	IIC_CLK	O	IIC SCL output.
30	IIC_DATA	O	IIC SDA output.
31	TXD1	O	Write data output for FLASH connector
32	RXD1	O	Read data output for FLASH connector
33	SQ-CLK	O	Clock data output for FLASH connector
34	RST1	I	Reset input for FLASH connector
35	HEAD PHONE	I	Head phone signal detect. H=ON,L=OFF
36	LINE-MUTE	O	Line mute signal output. L=ON, H=OFF
37	DVD RESET	O	DVD IF ucom RESET/MDM power down(Not used.)
38	TEST	I	Test terminal
39	CLOCK-OUT	I	Clock check signal input. (Not used.)
40	PL-LAT	O	Latch output to PRO-LOGIC IC
41	PL-CLK/SUR1	O	Clock output to PRO-LOGIC IC/Surround control signal output
42	PL-DATA/SUR2	O	Data output to PRO-LOGIC IC/Surround control signal output
43	502-LAT	O	Latch output to sound processor

Pin No.	Pin Name	I/O	Descriptions
44	502-DATA	O	Data output to sound processor
45	502-CLK	O	Clock output to sound processor
46	ST-CLK	O	TUNER clock signal output.
47	ST-DIN	I	TUNER data input.
48	ST-DOUT	O	TUNER data output.
49	ST-CE	O	TUNER chip eneble output.
50	TUNED	I	TUNED detect signal input. L=ON, H=OFF
51	STEREO	I	STEREO detect signal input. L=ON, H=OF
52	ST-MUTE	O	Tuner mute signal output.
53	AMS-IN	I	AMS signal input. L=ON,H=OFF”
54	TC-MUTE	O	Tape deck line mute ON/OFF signal output. H=ON, L=OFF
55	$\overline{R}$/PB/PAS	I	REC/PB/PASS select signal input.
56	NR-ON/$\overline{OFF}$	O	DOLBY NR ON/OFF signal output. H=ON, L=OFF
57	REC-MUTE	O	REC mute ON/OFF signal output. L=ON, H=OFF
58	BAIS	O	BIAS ON/OFF signal output.H=ON, L=OFF
59	EQ-H/$\overline{N}$	O	EQ High/Normal select signal output. H=High, L=Normal
60	PB-$\overline{A}$/B	O	Playback deckA/B select signal output. H=deckB, L=deckA
61	$\overline{ALC}$	O	ALC ON/OFF signal output. L=ON, H=OFF
62	VCC	—	Power Supply (+5V)
63	TC-RELAY	O	Tape deck relay ON/OFF signal output. H=ON, L=OFF
64	VSS	—	Ground.
65	A TRIG	O	A deck trigger control signal output.H=ON, L-OFF
66	B TRIG	O	B deck trigger control signal output.H=ON, L-OFF
67	CAPM-H/L	O	Capstan motor High/Low speed control signal output.
68	CAPM-CNT	O	Capstan motor REV/FWD/STOP control signal output.H=REV, L=FWD/STOP
69	A HALF	I	A deck half detect signal input.
70	A PLAY	I	A deck play detect signal input.
71	B PLAY	I	B deck play detect signal input.
72	IIC-BUSY	I	IIC_BUSY(Not used.)
73	LOD-POS	O	CD loading motor control signal output
74	LOD-NEG	O	CD loading motor control signal output
75	OUT SW	I	Detection input from the tray open/close detect switch (S708) on the CD mechanism block
76	MIDOUT SW	I	Detection input from the mid out detect switch (S701) on the CD mechanism block
77	IN SW	I	Detection input from the tray open/close detect switch (S704) on the CD mechanism block
78	MIDIN SW	I	Detection input from the mid in detect switch (S703) on the CD mechanism block
79	CLP-POS	O	CD elevator up/down motor (M701) control signal output to the motor driver IC (IC701)
80	CLP-NEG	O	CD elevator up/down motor (M701) control signal output to the motor driver IC (IC701)
81	INIT SW	I	Detection input from the INIT detection switch (S705) on the CD mechanism block
82	CNT-SW	I	Detection input from the count detect switch (S706) on the CD mechanism block
83 to 85	ENC2, ENC1, ENC0	I	Detection input from the disc tray address detect rotary encoder (S707) on the CD mechanism block
86	DISC-SENS	I	Detection input from the disc in detect sensor (D704 and Q703) on the CD mechanism block
87	PRTC SW	I	Detection input from the CD tray door open/close detect switch (S702)
88	SOFT-TEST	—	Not used.

Pin No.	Pin Name	I/O	Descriptions
89	A SHUT	O	A deck reel pulse detect signal output.
90	B SHUT	O	B deck reel pulse detect signal output.
91	B HALF/REC A/REC B	I	B deck half detect signal input./A deck or B deck record detect signal input.
92	MODEL-IN	I	MODEL input.
93	SPEC-IN	I	Version select signal input.
94	POWER	O	POWER ON/OFF signal output. H=ON, L=OFF
95	SENS	I	BD condition signal input.
96	AVSS	—	Analog ground.
97	HOLD	O	MODE signal input.
98	VREF	—	Analog Reference Voltage
99	AVCC	—	Analog Power Supply
100	XRST	O	CD reset signal output.

• IC701 TMP88CS77AF-1A84 SYSTEM CONTROL (PANEL BOARD)

Pin No.	Pin Name	I/O	Descriptions
1	LED SEL	O	LED select signal output
2 to 12	LED0 to LED10	O	LED driver output
13	STANDBY LED	O	STANDBY LED driver output
14	TIMER LED	O	TIMER SEL LED driver output
15, 16	VOLUME A, B	I	Rotary encoder pulse input
17 to 22	BPF1 to BPF5	I	Rec level signal input
23	L+R	I	Rec level signal input for feedback
24 to 26	KEY 0 to KEY2	I	Key input
27	STICK 1	I	STICK CONTROL Up / Down
28	STICK 2	I	STICK CONTROL Right / Left
29	VSS	—	Ground
30	VASS	—	Ground
31	VAREF	—	Analog reference voltage
32	VDD	—	Power supply
33	GRID EXT CLK	O	Clock output for GRID EXTENDER
34	2G	O	FL gride signal output
35	1G	O	FL gride signal output
36 to 50	P35 to P49	O	FL segment signal output
51	VDD	—	Power supply
52	GRID EXT RESET	O	Reset output for GRID EXTENDER
53 to 86	P34 to P1	O	FL segment signal output
87	VKK	—	Power supply for FL segment signal output
88	VDD	—	Power supply
89	X IN	I	X'tal(12.5MHz) input
90	VSS	—	Ground
91	X OUT	O	X'tal(12.5MHz) output
92	RESET	I	RESET signal input
93	LED11	O	LED driver output
94	LED12	O	LED driver output(Not used)
95	TEST	I	Connected to ground
96	WAKE UP	O	WAKE-UP signal output
97	I2C data	O	IIC serial data output
98	I2C clk	O	IIC serial clock output
99	LED13	O	LED driver output
100	SIRCS	I	Remote commander input

SECTION 7
EXPLODED VIEWS

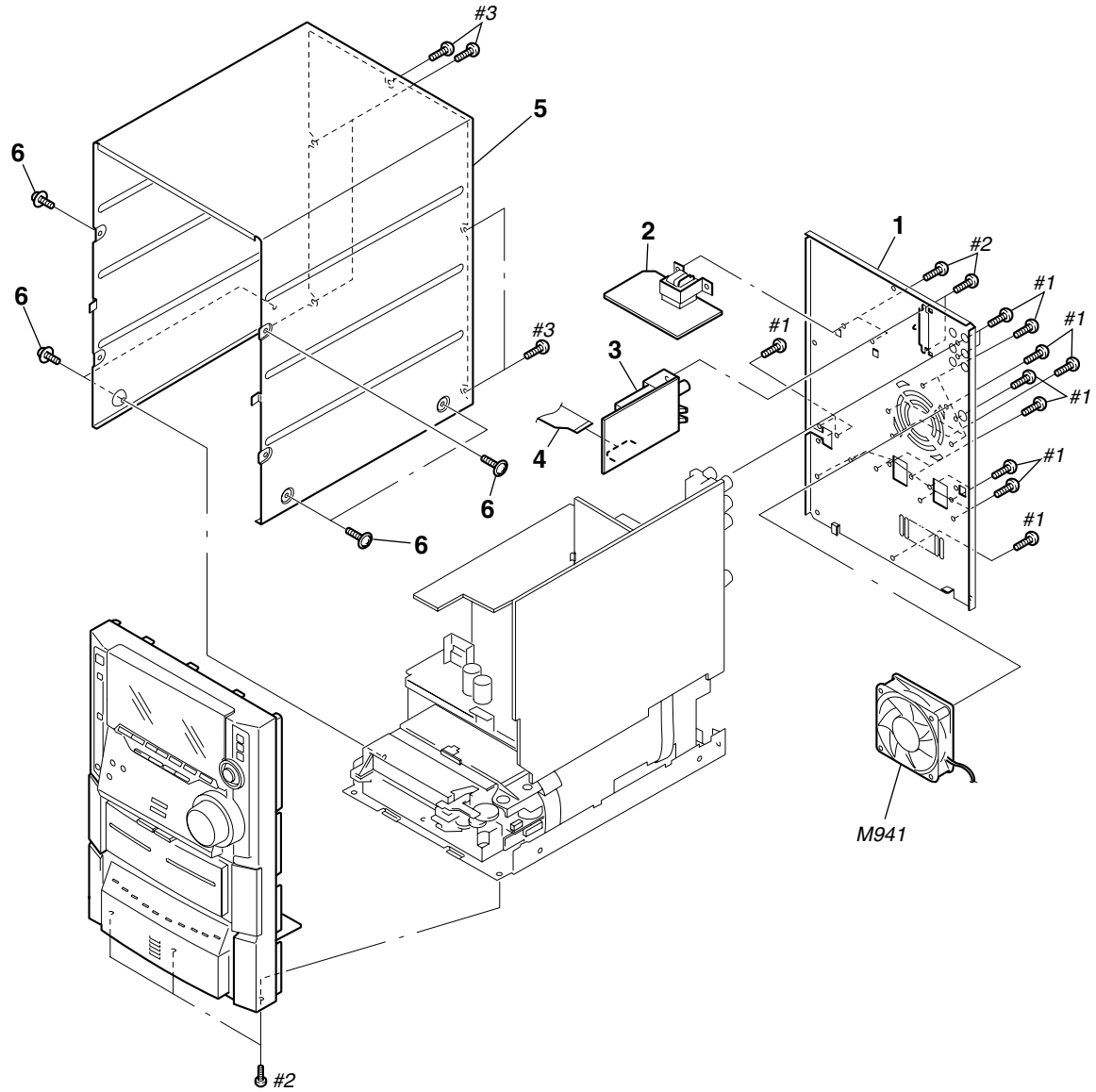
NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation
  CND : Canadian model

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

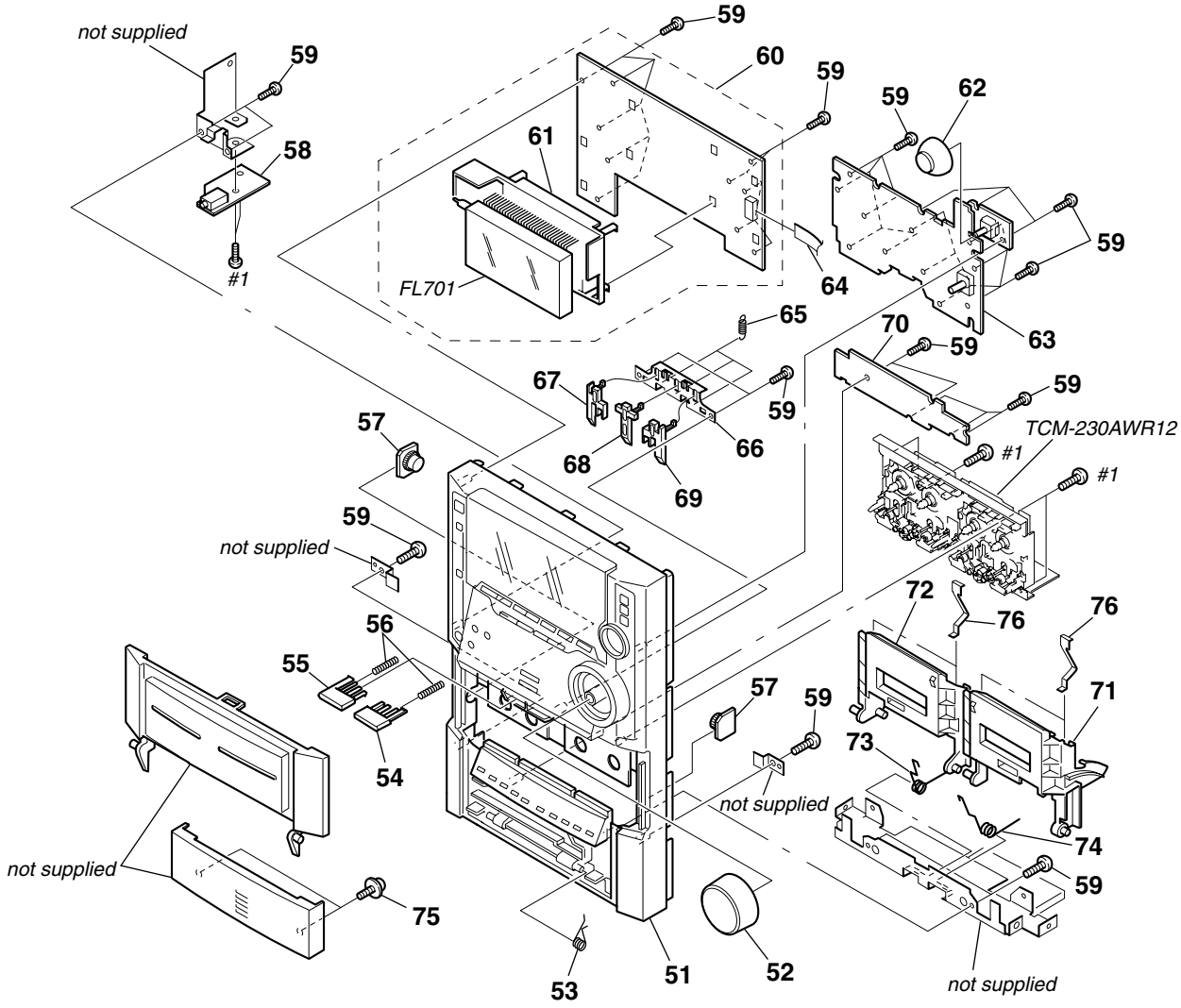
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

7-1. BACK PANEL SECTION



Ref. No.	Part No.	Description	Remarks
1	4-226-747-01	PANEL, BACK(US)	
1	4-226-747-11	PANEL, BACK(CND)	
1	4-226-747-21	PANEL, BACK(EXCEPT US,CND)	
2	1-676-976-11	SUB TRANS BOARD	
3	1-693-486-11	TUNER(FM/AM)(US,CND)	
3	1-693-490-11	TUNER(FM/AM)(EXCEPT US,CND)	
4	1-769-980-11	WIRE(FLAT TYPE) (13 CORE)(US,CND)	
4	1-773-013-11	WIRE(FLAT TYPE) (15 CORE)(EXCEPT US,CND)	
5	4-226-746-01	CASE	
6	3-363-099-21	SCREW(CASE 3 TP2)	
M941	1-763-072-11	FAN, DC	

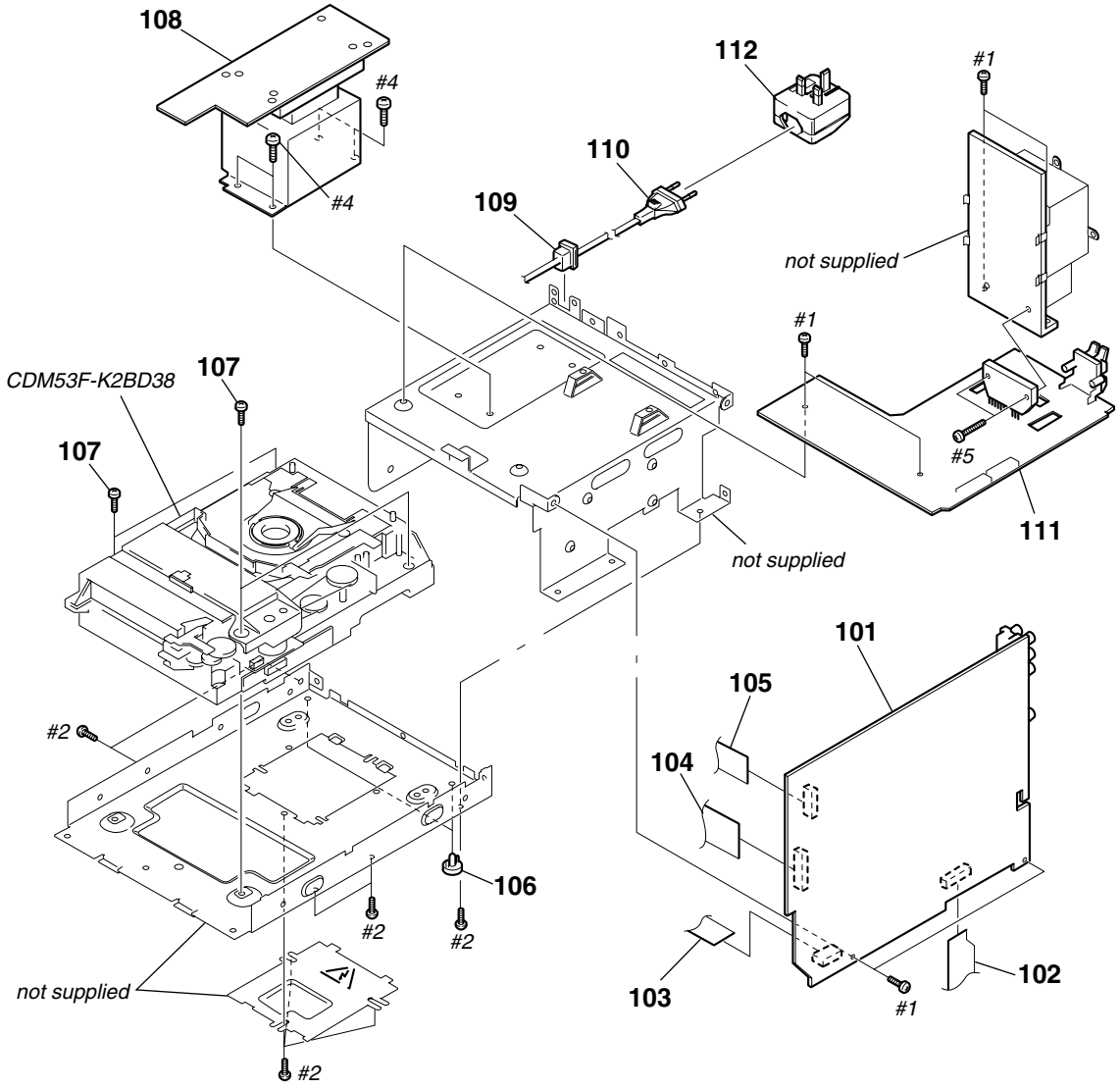
7-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remarks
51	X-4952-705-1	PANEL ASSY, FRONT(US,CND)	
51	X-4952-706-1	PANEL ASSY, FRONT(EXCEPT US,CND)	
52	4-226-715-01	KNOB, VOLUEME	
53	4-226-897-01	SPRING (CD)	
54	4-226-735-01	BUTTON (B), EJECT	
55	4-226-734-01	BUTTON (A), EJECT	
56	4-226-537-01	SPRING (TC EJECT), COIL	
57	4-224-104-11	DAMPER	
58	1-676-971-11	HP BOARD	
59	4-951-620-01	SCREW (2.6X8), +BVTP	
60	A-4428-655-A	PANEL BOARD, COMPLETE	
61	4-226-723-01	HOLDER (FL)	
62	4-226-713-01	CURSOR	
63	A-4428-658-A	SUB PANEL BOARD, COMPLETE	

Ref. No.	Part No.	Description	Remarks
64	1-769-938-11	WIRE(FLAT TYPE) (11 CORE)	
65	4-227-544-01	SPRING, TENSION	
66	4-226-755-01	COVER, LOCK	
67	4-226-733-01	LOCK(B)	
68	4-226-731-01	LOCK(LID)	
69	4-226-732-01	LOCK(A)	
70	A-4428-661-A	CD SW BOARD, COMPLETE	
71	X-4952-712-1	HOLDER (B) ASSY, TC	
72	X-4952-711-1	HOLDER (A) ASSY, TC	
73	4-227-458-01	SPRING (TC A)	
74	4-227-459-01	SPRING (TC B)	
75	4-957-577-01	SCREW PTP WH (2.6X8) (DIA. 10)	
76	4-959-229-11	DETENT, CASSETTE	
FL701	1-517-958-11	INDICATOR TUBE, FLUORESCENT	

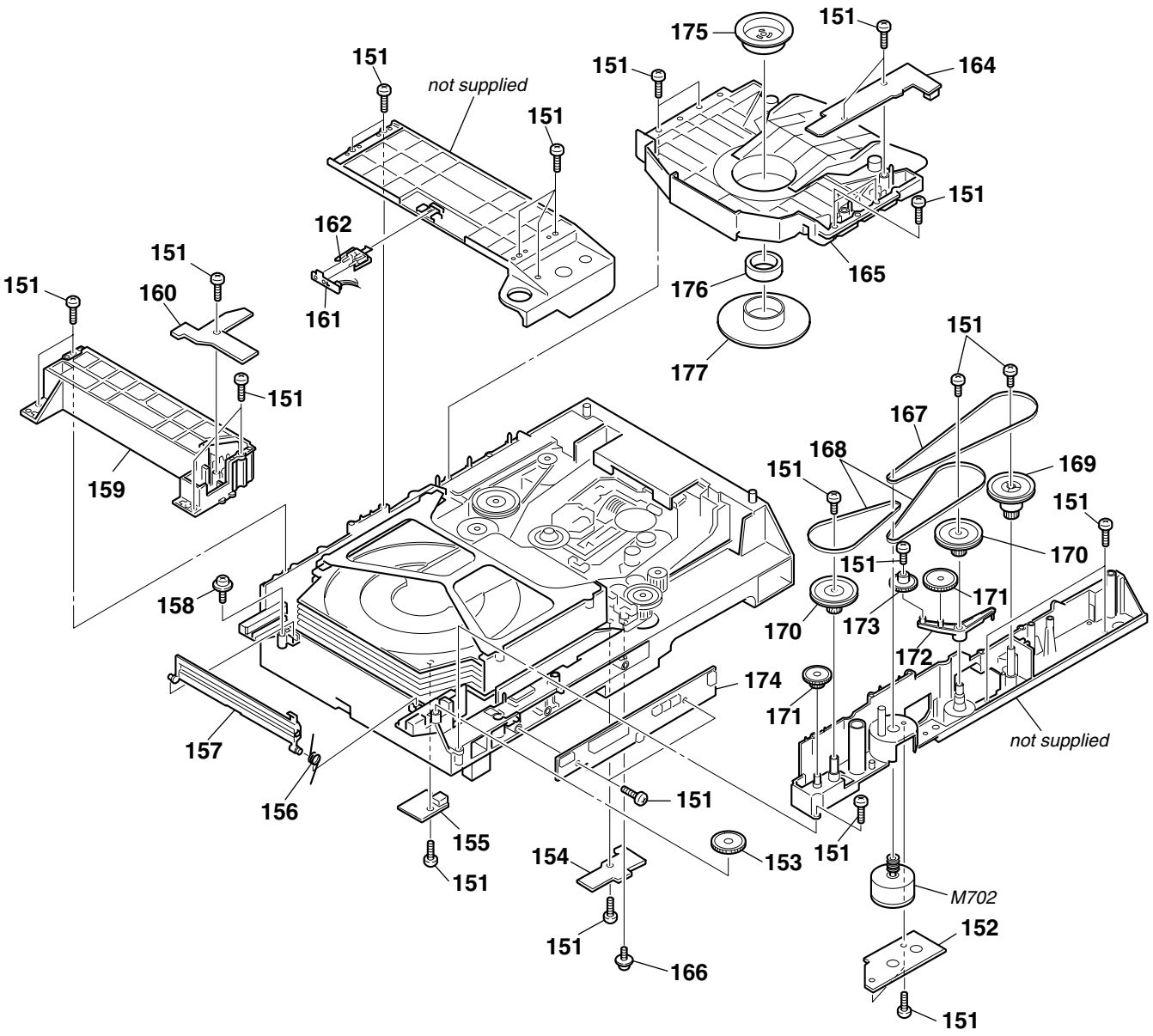
7-3. CHASSIS SECTION



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remarks
101	A-4428-653-A	MAIN BOARD, COMPLETE(US,CND)	
101	A-4428-668-A	MAIN BOARD, COMPLETE(EXCEPT US,CND)	
102	1-792-794-11	WIRE (FLAT TYPE) (19 CORE)	
103	1-773-041-11	WIRE (FLAT TYPE) (17 CORE)	
104	1-773-045-11	WIRE (FLAT TYPE) (17 CORE)	
105	1-773-022-11	WIRE (FLAT TYPE) (15 CORE)	
106	4-965-822-01	FOOT	
107	3-970-608-11	SUMITITE (B3), +BV	
108	1-676-975-11	TRANS BOARD	
* 109	3-703-244-00	BUSHING (2104), CORD	
⚠110	1-690-609-21	CORD, POWER(CND)	
⚠110	1-777-070-11	CORD, POWER(CND)	
⚠110	1-777-071-51	CORD, POWER(EXCEPT US,CND)	
⚠110	1-783-531-11	CORD, POWER(US)	
111	A-4428-649-A	FRONT AMP BOARD, COMPLETE(US)	
111	A-4428-663-A	FRONT AMP BOARD, COMPLETE (EXCEPT US,CND)	
111	A-4428-941-A	FRONT AMP BOARD, COMPLETE(CND)	
⚠112	1-770-019-11	ADAPTOR, CONVERSION PLUG 3P(UK)	

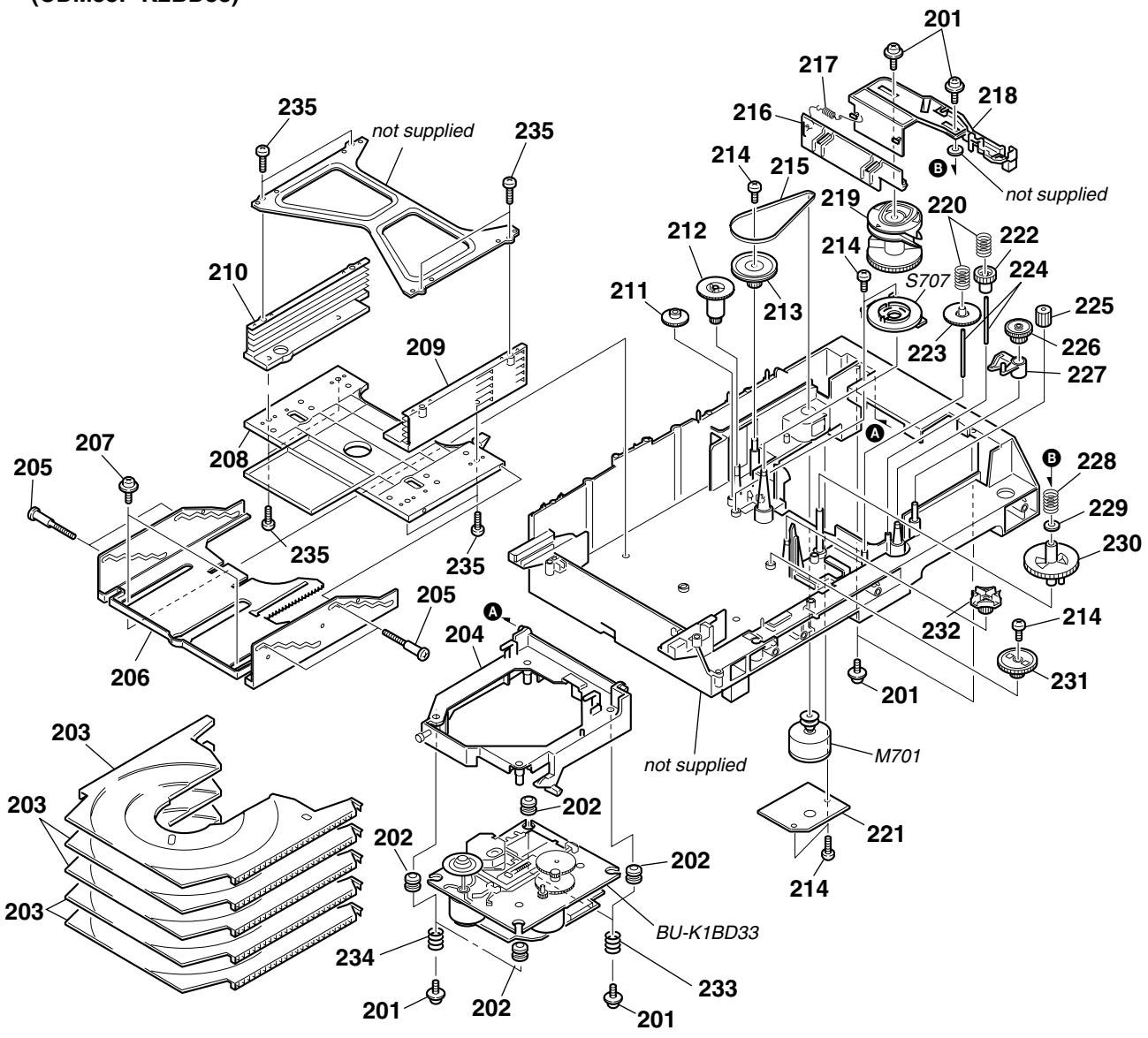
7-4. CD MECHANISM DECK SECTION-1
(CDM53F-K2BD38)



Ref. No.	Part No.	Description	Remarks
151	4-218-253-11	SCREW (M2.6), +BTTP	
152	1-671-508-11	LOAD MOTOR BOARD	
153	4-211-215-01	GEAR (EJECT)	
154	1-671-502-11	INT/COUNT SW BOARD	
155	1-671-504-11	SENSOR BOARD	
156	4-212-676-01	SPRING (LID), TORSION	
157	4-212-674-01	LID(DISC)	
158	4-985-672-01	SCREW (+PTPWH M2.6), FLOATING	
159	A-4672-873-A	BASE (GUIDE) ASSY, FITTING	
160	1-671-503-11	OUT SW BOARD	
161	1-671-789-11	SENSOR 2 BOARD	
162	4-964-461-02	HOLDER (SENSOR)	
164	1-671-505-11	IN SW BOARD	
165	A-4672-872-D	BASE (MAGNET) ASSY, FITTING	

Ref. No.	Part No.	Description	Remarks
166	3-341-549-01	SCREW (2.6X12) (DIA.7.5),+PTP WH	
167	4-211-235-01	BELT (COMMUNICATION)	
168	4-211-236-01	BELT (LOADING)	
169	4-211-231-01	PULLEY (MODE)	
170	4-211-214-01	PULLEY (LD)	
171	4-211-232-01	GEAR (LD DECELERATION)	
172	4-211-228-01	LEVER (GOOSENECK)	
173	4-214-130-01	GEAR (TRAY)	
174	1-671-506-11	CONNECTOR BOARD	
175	4-225-368-01	PULLEY(C), CHUCKING	
176	1-471-061-11	MAGNET ASSY	
177	X-4952-746-1	PULLEY(D) ASSY, CHUCKING	
M702	X-4950-342-1	MOTOR (LOADING) ASSY	

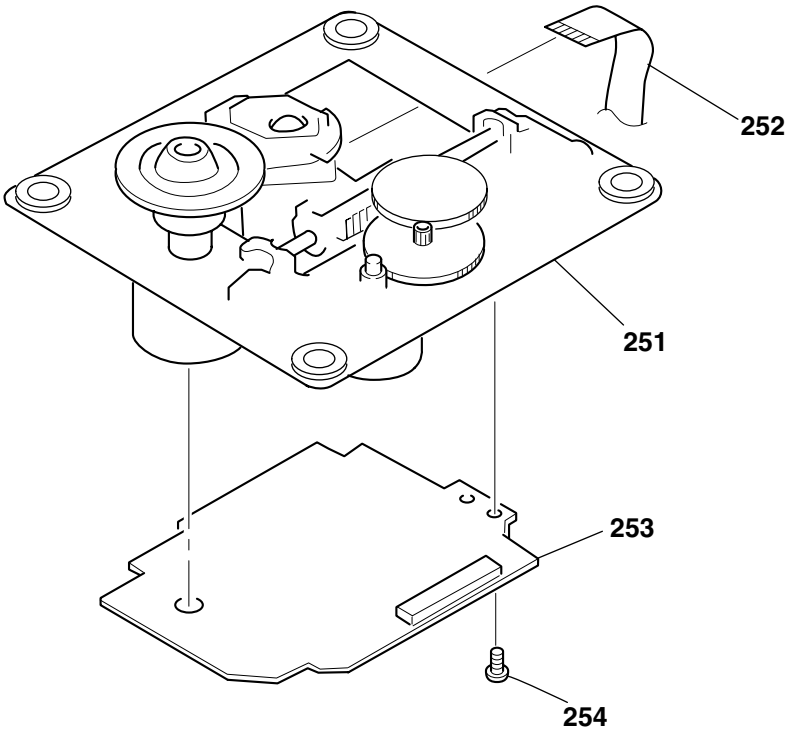
7-5. CD MECHANISM DECK SECTION-2
(CDM53F-K2BD38)



Ref. No.	Part No.	Description	Remarks
201	4-985-672-01	SCREW (+PTPWH M2.6), FLOATING	
202	4-220-933-01	INSULATOR	
203	4-211-212-51	TRAY (SUB)	
204	X-4950-322-3	HOLDER (BU) ASSY	
205	4-211-244-01	SCREW, STEP	
206	4-211-223-01	SLIDER (U/D)	
207	4-933-134-01	SCREW (M2.6), +PTPWH	
208	4-221-504-01	BASE (STOCKER), FITTING	
209	4-211-211-01	STOCKER (R)	
210	4-211-210-01	STOCKER (L)	
211	4-211-215-01	GEAR (EJECT)	
212	4-211-232-01	GEAR (MODE DECELERATION)	
213	4-211-214-01	PULLEY (LD)	
214	4-218-253-31	SCREW (M2.6), +BTTP	
215	4-211-237-01	BELT (MODE)	
216	4-212-677-01	SLIDER (SHUTTER)	
217	4-212-678-01	SPRING (SHUTTER), TENSION	
218	4-211-233-01	SLIDER (SELECTION)	
219	4-211-230-01	GEAR (CHUCKING)	

Ref. No.	Part No.	Description	Remarks
220	4-211-245-01	SPRING, COMPRESSION	
221	1-671-507-11	CLAMP MOTOR BOARD	
222	4-211-221-01	GEAR (LD MOVABLE)	
223	4-211-217-01	GEAR (SELECTION)	
224	4-211-242-11	SHAFT (SELECTION GEAR)	
225	4-211-240-01	GEAR (LD DECELERATION B)	
226	4-211-216-01	GEAR (RELAY)	
227	4-211-241-01	LEVER (SELECTION)	
228	4-216-879-01	SPRING (GEAR), COMPRESSION	
229	3-701-446-21	WASHER	
230	4-211-218-01	GEAR (GEAR A)	
231	4-211-220-01	GEAR (U/D SLIDER)	
232	4-211-219-01	GEAR (GEAR B)	
233	4-222-784-01	SPRING (INSULATOR),COMPRESSION	
234	4-222-785-01	SPRING (INSULATOR),COMPRESSION	
235	4-218-253-21	SCREW (M2.6), +BTTP	
M701	X-4950-341-1	MOTOR (CLAMP) ASSY	
S707	1-418-045-01	ENCODER, ROTARY(ELEVATOT UP/DOWN)	

7-6. BASE UNIT SECTION
(BU-K2BD38)

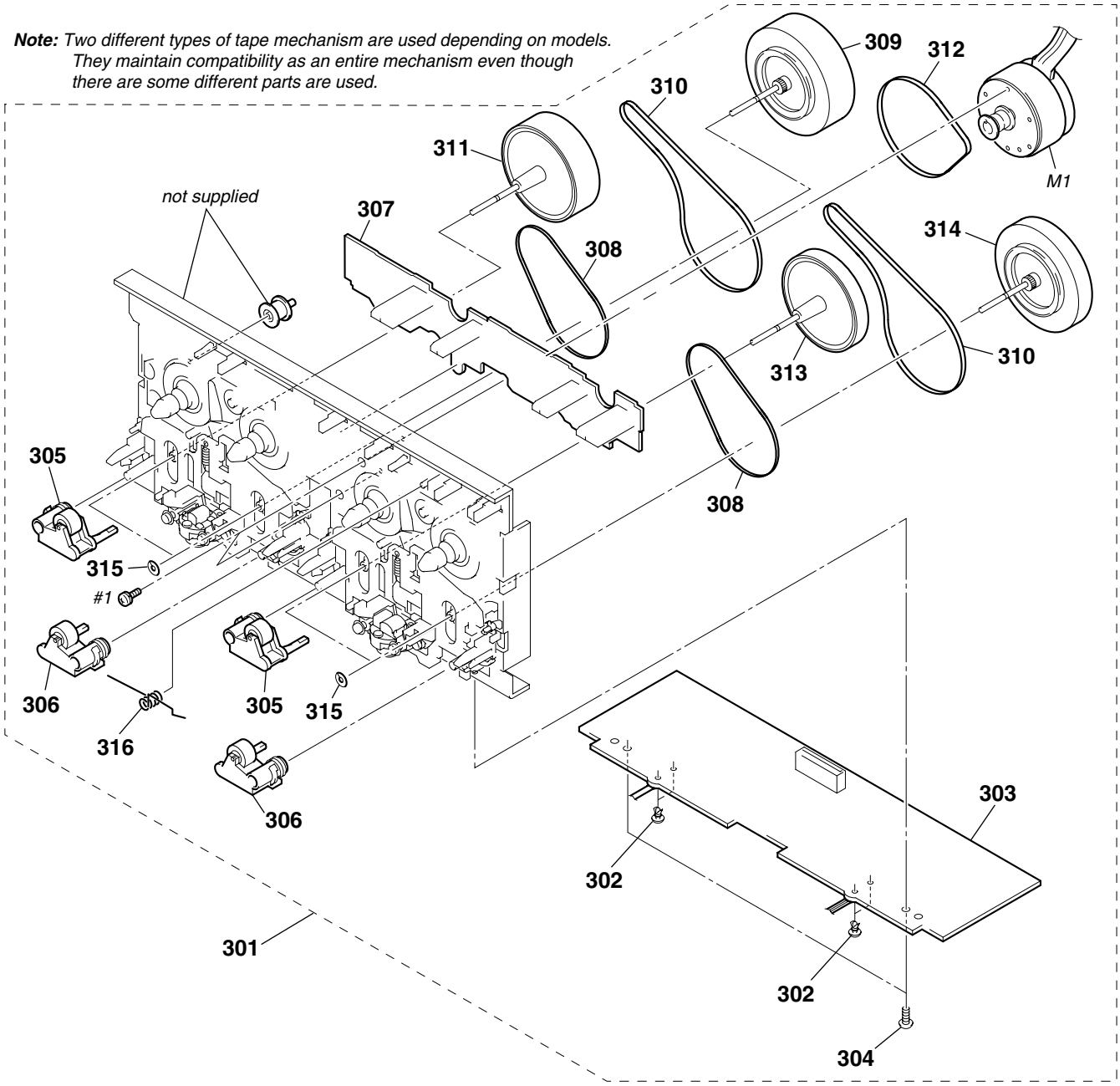


The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remarks
⚠251	8-820-116-01	OPICAL PICK-UP BLOCK KSM-213DAP/Z-NP	
252	1-792-024-11	WIRE (FLAT TYPE) (16 CORE)	
253	A-4724-934-A	BD BOARD, COMPLETE	
254	4-951-620-01	SCREW (2.6X8), +BVTP	

7-7. TAPE MECHANISM DECK SECTION (TCM-230AWR12)

Note: *Two different types of tape mechanism are used depending on models. They maintain compatibility as an entire mechanism even though there are some different parts are used.*



Ref. No.	Part No.	Description	Remarks
301	A-2100-898-A	TAPE MECHANISM ASSY TCM-230AWR12	
302	3-911-116-42	RIVET, PUSH	
303	A-2007-845-A	AUDIO BOARD, COMPLETE	
304	3-376-464-11	SCREW(+PTT 2.6X6),GROUND POINT	
305	X-3374-156-4	PINCH LEVER (REV) ASSY	
306	X-3374-155-4	PINCH LEVER (FWD) ASSY	
307	A-2007-838-A	LEAF SW BOARD, COMPLETE	
308	3-041-947-01	BELT (FR)	
309	X-3378-041-1	FLYWHEEL (A-REV) ASSY	
310	3-041-946-01	BELT (CAPSTAN B)	
311	X-3378-040-1	FLYWHEEL (A-FWD) ASSY	
312	4-227-239-01	BELT (CAPSTAN C)	
313	X-3378-042-1	FLYWHEEL (B-FWD) ASSY	
314	X-3378-043-1	FLYWHEEL (B-REV) ASSY	
315	3-019-208-01	WASHER, STOPPER	
316	4-227-455-02	SPRING(HALF), TORSION	
M1	X-3378-241-1	MOTOR ASSY	

SECTION 8
ELECTRICAL PARTS LIST

AUDIO

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS:
  uF: µF
- RESISTORS
  All resistors are in ohms.
  METAL: metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- COILS
  uH: µH
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA...: µA... , uPA... , µPA... , uPB... , µPB... , uPC... , µPC... , uPD..., µPD...
- Abbreviation
  CND : Canadian model

When indicating parts by reference number, please include the board name.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description				Remarks
	A-2007-845-A	AUDIO BOARD, COMPLETE				
		**********				
		< CAPACITOR >				
C301	1-162-289-31	CERAMIC	390PF	10.00%	50V	
C302	1-126-968-11	ELECT	100uF	20.00%	6.3V	
C303	1-162-282-31	CERAMIC	100PF	10%	50V	
C304	1-130-483-00	MYLAR	0.01uF	5%	50V	
C305	1-107-715-11	ELECT	22uF	20.00%	16V	
C311	1-162-289-31	CERAMIC	390PF	10.00%	50V	
C313	1-162-282-31	CERAMIC	100PF	10%	50V	
C314	1-130-487-00	MYLAR	0.022uF	5%	50V	
C315	1-126-233-11	ELECT	22uF	20%	50V	
C331	1-137-427-11	MYLAR	120PF	5.00%	50V	
C332	1-162-288-31	CERAMIC	330PF	10%	50V	
C333	1-162-209-31	CERAMIC	27PF	5.00%	50V	
C401	1-162-289-31	CERAMIC	390PF	10.00%	50V	
C402	1-126-968-11	ELECT	100uF	20.00%	6.3V	
C403	1-162-282-31	CERAMIC	100PF	10%	50V	
C404	1-130-483-00	MYLAR	0.01uF	5%	50V	
C405	1-107-715-11	ELECT	22uF	20.00%	16V	
C411	1-162-289-31	CERAMIC	390PF	10.00%	50V	
C413	1-162-282-31	CERAMIC	100PF	10%	50V	
C414	1-130-487-00	MYLAR	0.022uF	5%	50V	
C415	1-126-233-11	ELECT	22uF	20%	50V	
C431	1-137-427-11	MYLAR	120PF	5.00%	50V	
C432	1-162-288-31	CERAMIC	330PF	10%	50V	
C433	1-162-209-31	CERAMIC	27PF	5.00%	50V	
C601	1-104-396-11	ELECT	10uF	20.00%	16V	
C602	1-104-396-11	ELECT	10uF	20.00%	16V	
C611	1-104-396-11	ELECT	10uF	20.00%	16V	
C612	1-104-396-11	ELECT	10uF	20.00%	16V	
C621	1-137-150-11	FILM	0.01uF	5.00%	100V	
C622	1-126-961-11	ELECT	2.2uF	20.00%	50V	
C623	1-136-155-00	FILM	0.015uF	5%	50V	
C624	1-130-481-00	MYLAR	0.0068uF	5%	50V	
C625	1-130-481-00	MYLAR	0.0068uF	5%	50V	
C627	1-124-903-11	ELECT	1uF	20.00%	50V	
C628	1-136-153-00	FILM	0.01uF	5%	50V	
C642	1-104-664-11	ELECT	47uF	20.00%	16V	
		< CONNECTOR >				
CN601	1-695-338-11	PIN, CONNECTOR (PC BOARD) 15P				

Ref. No.	Part No.	Description				Remarks
		< IC >				
IC601	8-759-111-44	IC uPC4570C-1				
IC602	8-759-143-54	IC uPC1330HA				
IC611	8-759-111-44	IC uPC4570C-1				
		< COIL >				
L331	1-410-780-11	INDUCTOR	27MH			
L431	1-410-780-11	INDUCTOR	27MH			
		< TRANSISTOR >				
Q621	8-729-142-46	TRANSISTOR 2SC2001TP-LK				
Q622	8-729-142-46	TRANSISTOR 2SC2001TP-LK				
Q623	8-729-801-93	TRANSISTOR 2SD1387-34-TP				
		< RESISTOR >				
R301	1-247-881-00	CARBON	120K	5%	1/4W	
R302	1-249-409-11	CARBON	220	5%	1/4W	F
R303	1-249-433-11	CARBON	22K	5%	1/4W	
R304	1-247-889-00	CARBON	270K	5%	1/4W	
R305	1-247-858-11	CARBON	13K	5%	1/4W	
R311	1-247-881-00	CARBON	120K	5%	1/4W	
R312	1-247-807-31	CARBON	100	5%	1/4W	
R314	1-247-882-11	CARBON	130K	5%	1/4W	
R315	1-247-850-11	CARBON	6.2K	5%	1/4W	
R331	1-249-430-11	CARBON	12K	5%	1/4W	
R401	1-247-881-00	CARBON	120K	5%	1/4W	
R402	1-249-409-11	CARBON	220	5%	1/4W	F
R403	1-249-433-11	CARBON	22K	5%	1/4W	
R404	1-247-889-00	CARBON	270K	5%	1/4W	
R405	1-247-858-11	CARBON	13K	5%	1/4W	
R411	1-247-881-00	CARBON	120K	5%	1/4W	
R412	1-247-807-31	CARBON	100	5%	1/4W	
R414	1-247-882-11	CARBON	130K	5%	1/4W	
R415	1-247-850-11	CARBON	6.2K	5%	1/4W	
R431	1-249-430-11	CARBON	12K	5%	1/4W	
R601	1-249-409-11	CARBON	220	5%	1/4W	F
R602	1-249-409-11	CARBON	220	5%	1/4W	F
R608	1-249-409-11	CARBON	220	5%	1/4W	F
R609	1-249-433-11	CARBON	22K	5%	1/4W	
R611	1-249-409-11	CARBON	220	5%	1/4W	F
R612	1-249-409-11	CARBON	220	5%	1/4W	F
R621	1-212-851-00	FUSIBLE	5.6	5%	1/4W	
R622	1-212-851-00	FUSIBLE	5.6	5%	1/4W	
R623	1-249-432-11	CARBON	18K	5%	1/4W	

AUDIO BD

Ref. No.	Part No.	Description			Remarks
R624	1-249-432-11	CARBON	18K	5%	1/4W
R625	1-249-429-11	CARBON	10K	5%	1/4W
		< VARIABLE RESISTOR >			
RV301	1-238-598-11	RES, ADJ, CARBON 2.2K			
RV311	1-238-598-11	RES, ADJ, CARBON 2.2K			
RV341	1-241-768-11	RES, ADJ, CARBON 220K			
RV401	1-238-598-11	RES, ADJ, CARBON 2.2K			
RV411	1-238-598-11	RES, ADJ, CARBON 2.2K			
RV441	1-241-768-11	RES, ADJ, CARBON 220K			
		< TRANSFORMER >			
T621	1-423-980-11	TRANSFORMER, BIAS OSCILLATION			
**********					
	A-4724-934-A	BD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C102	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C103	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C104	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C108	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C109	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C110	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C111	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C112	1-107-682-11	CERAMIC CHIP	1uF	10.00%	16V
C114	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C115	1-104-665-11	ELECT	100uF	20.00%	10V
C116	1-104-665-11	ELECT	100uF	20.00%	10V
C117	1-104-665-11	ELECT	100uF	20.00%	10V
C118	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C119	1-163-235-11	CERAMIC CHIP	22PF	5.00%	50V
C121	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C122	1-104-665-11	ELECT	100uF	20.00%	10V
C123	1-163-021-91	CERAMIC CHIP	0.01uF	10.00%	50V
C124	1-107-823-11	CERAMIC CHIP	0.47uF	10.00%	16V
C125	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C126	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C127	1-104-665-11	ELECT	100uF	20.00%	10V
C129	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C130	1-164-346-11	CERAMIC CHIP	1uF		16V
C131	1-126-964-11	ELECT	10uF	20.00%	50V
C133	1-164-346-11	CERAMIC CHIP	1uF		16V
C140	1-164-346-11	CERAMIC CHIP	1uF		16V
C141	1-164-346-11	CERAMIC CHIP	1uF		16V
C143	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C145	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C153	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C159	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C162	1-104-665-11	ELECT	100uF	20.00%	10V
C163	1-104-665-11	ELECT	100uF	20.00%	10V
C165	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C167	1-163-237-11	CERAMIC CHIP	27PF	5.00%	50V
C168	1-163-235-11	CERAMIC CHIP	22PF	5.00%	50V
C171	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C172	1-163-123-00	CERAMIC CHIP	180PF	5%	50V
C181	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V

Ref. No.	Part No.	Description			Remarks
C182	1-163-123-00	CERAMIC CHIP	180PF	5%	50V
		< CONNECTOR >			
CN101	1-784-741-11	CONNECTOR, FFC 19P			
CN102	1-793-907-11	CONNECTOR, FFC/FPC 16P			
		< FERRITE BEAD >			
FB101	1-500-445-21	FERRITE 0UH			
FB103	1-500-445-21	FERRITE 0UH			
		< IC >			
IC101	8-752-386-85	IC CXD2587Q			
IC102	8-759-549-28	IC BA5974FP-E2			
IC103	8-752-085-51	IC CXA2568M-T6			
		< TRANSISTOR >			
Q101	8-729-049-31	TRANSISTOR 2SB710-RTX			
		< RESISTOR >			
R101	1-216-077-91	RES-CHIP	15K	5%	1/10W
R102	1-216-097-91	RES-CHIP	100K	5%	1/10W
R103	1-216-077-91	RES-CHIP	15K	5%	1/10W
R104	1-216-085-00	METAL CHIP	33K	5%	1/10W
R105	1-216-073-00	METAL CHIP	10K	5%	1/10W
R106	1-216-049-91	RES-CHIP	1K	5%	1/10W
R107	1-216-073-00	METAL CHIP	10K	5%	1/10W
R108	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R109	1-216-121-91	RES-CHIP	1M	5%	1/10W
R110	1-216-025-91	RES-CHIP	100	5%	1/10W
R111	1-216-121-91	RES-CHIP	1M	5%	1/10W
R113	1-216-121-91	RES-CHIP	1M	5%	1/10W
R114	1-216-073-00	METAL CHIP	10K	5%	1/10W
R116	1-216-001-00	METAL CHIP	10	5%	1/10W
R117	1-216-049-91	RES-CHIP	1K	5%	1/10W
R118	1-216-025-91	RES-CHIP	100	5%	1/10W
R119	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R123	1-216-073-00	METAL CHIP	10K	5%	1/10W
R124	1-216-097-91	RES-CHIP	100K	5%	1/10W
R131	1-216-033-00	METAL CHIP	220	5%	1/10W
R143	1-216-103-00	METAL CHIP	180K	5%	1/10W
R144	1-216-103-00	METAL CHIP	180K	5%	1/10W
R147	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R148	1-216-001-00	METAL CHIP	10	5%	1/10W
R149	1-216-001-00	METAL CHIP	10	5%	1/10W
R158	1-216-111-00	METAL CHIP	390K	5%	1/10W
R159	1-216-101-00	METAL CHIP	150K	5%	1/10W
R162	1-216-101-00	METAL CHIP	150K	5%	1/10W
R171	1-216-078-00	RES-CHIP	16K	5%	1/10W
R172	1-216-073-00	METAL CHIP	10K	5%	1/10W
R173	1-216-077-91	RES-CHIP	15K	5%	1/10W
R181	1-216-078-00	RES-CHIP	16K	5%	1/10W
R182	1-216-073-00	METAL CHIP	10K	5%	1/10W
R183	1-216-077-91	RES-CHIP	15K	5%	1/10W
		< RESISTOR ARRAY >			
RN101	1-233-576-11	RES, CHIP NETWORK 100			

Ref. No.	Part No.	Description				Remarks
		< SWITCH >				
S101	1-771-853-11	SWITCH, DETECTION(LIMIT IN SW)				
		< VIBRATOR >				
X101	1-579-280-11	VIBRATOR, CRYSTAL(16.9344MHz)				
**********						
	A-4428-661-A	CD SW BOARD, COMPLETE				
		**********				
		< LED >				
D661	8-719-058-64	LED SEL5823A-TP15(1)				
D662	8-719-058-64	LED SEL5823A-TP15(2)				
D663	8-719-058-64	LED SEL5823A-TP15(3)				
D664	8-719-058-64	LED SEL5823A-TP15(4)				
D665	8-719-058-64	LED SEL5823A-TP15(5)				
		< RESISTOR >				
R628	1-249-420-11	CARBON	1.8K	5%	1/4W F	
R629	1-249-422-11	CARBON	2.7K	5%	1/4W F	
R630	1-247-843-11	CARBON	3.3K	5%	1/4W	
R631	1-249-425-11	CARBON	4.7K	5%	1/4W F	
R632	1-249-427-11	CARBON	6.8K	5%	1/4W F	
R633	1-249-429-11	CARBON	10K	5%	1/4W	
R634	1-249-431-11	CARBON	15K	5%	1/4W	
R635	1-249-434-11	CARBON	27K	5%	1/4W	
R636	1-249-438-11	CARBON	56K	5%	1/4W	
R661	1-249-409-11	CARBON	220	5%	1/4W F	
R662	1-249-409-11	CARBON	220	5%	1/4W F	
R663	1-249-409-11	CARBON	220	5%	1/4W F	
R664	1-249-409-11	CARBON	220	5%	1/4W F	
R665	1-249-409-11	CARBON	220	5%	1/4W F	
		< SWITCH >				
S627	1-762-875-21	SWITCH, KEYBOARD (⏏ 5)				
S628	1-762-875-21	SWITCH, KEYBOARD (⏏ 4)				
S629	1-762-875-21	SWITCH, KEYBOARD (⏏ 3)				
S630	1-762-875-21	SWITCH, KEYBOARD (⏏ 2)				
S631	1-762-875-21	SWITCH, KEYBOARD (⏏ 1)				
S632	1-762-875-21	SWITCH, KEYBOARD (DISC 5)				
S633	1-762-875-21	SWITCH, KEYBOARD (DISC 4)				
S634	1-762-875-21	SWITCH, KEYBOARD (DISC 3)				
S635	1-762-875-21	SWITCH, KEYBOARD (DISC 2)				
S636	1-762-875-21	SWITCH, KEYBOARD (DISC 1)				
**********						
	1-671-507-11	CLAMP MOTOR BOARD				
		**********				
		< CAPACITOR >				
C701	1-162-306-11	CERAMIC	0.01uF	30.00%	16V	
C702	1-126-964-11	ELECT	10uF	20.00%	50V	
C711	1-162-306-11	CERAMIC	0.01uF	30.00%	16V	
		< CONNECTOR >				
CN712	1-506-469-11	PIN, CONNECTOR 4P				
		< DIODE >				
D701	8-719-983-66	DIODE MTZJ-T-72-3.6B				

Ref. No.	Part No.	Description				Remarks
		< IC >				
IC701	8-759-633-65	IC M54641L				
		< RESISTOR >				
R701	1-249-411-11	CARBON	330	5%	1/4W	
R702	1-249-401-11	CARBON	47	5%	1/4W F	
**********						
	1-671-506-11	CONNECTOR BOARD				
		**********				
		< CONNECTOR >				
CN701	1-568-860-11	SOCKET, CONNECTOR 17P				
		< TRANSISTOR >				
Q701	8-729-029-66	TRANSISTOR RT1N141S-TP				
		< RESISTOR >				
R707	1-249-424-11	CARBON	3.9K	5%	1/4W F	
R708	1-249-417-11	CARBON	1K	5%	1/4W F	
R709	1-249-429-11	CARBON	10K	5%	1/4W	
**********						
	A-4428-649-A	FRONT AMP BOARD, COMPLETE (US)				
		**********				
	A-4428-663-A	FRONT AMP BOARD, COMPLETE				(EXCEPT US,CND)
		**********				
	A-4428-941-A	FRONT AMP BOARD, COMPLETE (CND)				
		**********				
	7-685-646-79	SCREW +BVTP	3X8	TYPE2 N-S		
		< CAPACITOR >				
C801	1-126-963-11	ELECT	4.7uF	20.00%	50V	(EXCEPT US,CND)
C801	1-128-581-11	ELECT	4.7uF	20.00%	100V	(US,CND)
C802	1-162-286-31	CERAMIC	220PF	10%	50V	
C803	1-162-282-31	CERAMIC	100PF	10%	50V	
C804	1-104-664-11	ELECT	47uF	20.00%	10V	
C806	1-136-495-11	MYLAR	0.068uF	5.00%	50V	
C807	1-136-495-11	MYLAR	0.068uF	5.00%	50V	
C808	1-136-165-00	MYLAR	0.1uF	5.00%	50V	(EXCEPT US,CND)
C809	1-136-165-00	MYLAR	0.1uF	5.00%	50V	(EXCEPT US,CND)
C811	1-162-306-11	CERAMIC	0.01uF	30.00%	16V	
C812	1-162-306-11	CERAMIC	0.01uF	30.00%	16V	
C821	1-107-721-11	ELECT	4.7uF	20.00%	100V	
C822	1-107-717-11	ELECT	47uF	20.00%	50V	
C837	1-126-963-11	ELECT	4.7uF	20.00%	50V	
C851	1-126-963-11	ELECT	4.7uF	20.00%	50V	(EXCEPT US,CND)
C851	1-128-581-11	ELECT	4.7uF	20.00%	100V	(US,CND)
C852	1-162-286-31	CERAMIC	220PF	10%	50V	
C853	1-162-282-31	CERAMIC	100PF	10%	50V	
C854	1-104-664-11	ELECT	47uF	20.00%	10V	
C856	1-136-495-11	MYLAR	0.068uF	5.00%	50V	

FRONT AMP

Ref. No.	Part No.	Description			Remarks
C857	1-136-495-11	MYLAR	0.068uF	5.00% 50V	
C858	1-136-165-00	MYLAR	0.1uF	5.00% 50V	
				(EXCEPT US,CND)	
C859	1-136-165-00	MYLAR	0.1uF	5.00% 50V	
				(EXCEPT US,CND)	
C861	1-162-306-11	CERAMIC	0.01uF	30.00% 16V	
C862	1-162-306-11	CERAMIC	0.01uF	30.00% 16V	
C871	1-107-721-11	ELECT	4.7uF	20.00% 100V	
C872	1-126-959-11	ELECT	0.47uF	20.00% 50V	
C891	1-104-665-11	ELECT	100uF	20.00% 10V	
C892	1-126-961-11	ELECT	2.2uF	20.00% 50V	
C893	1-104-665-11	ELECT	100uF	20.00% 10V	
C911	1-130-777-00	MYLAR	0.1uF	10.00% 100V	
C912	1-130-777-00	MYLAR	0.1uF	10.00% 100V	
C951	1-127-752-11	ELECT	3300uF	20% 63V	
				(EXCEPT US)	
C951	1-127-753-11	ELECT	3300uF	20% 71V(US)	
C952	1-127-752-11	ELECT	3300uF	20% 63V	
				(EXCEPT US)	
C952	1-127-753-11	ELECT	3300uF	20% 71V(US)	
C961	1-128-560-11	ELECT	22uF	20.00% 100V	
C962	1-128-560-11	ELECT	22uF	20.00% 100V	
C963	1-126-968-11	ELECT	100uF	20.00% 50V	
C964	1-126-967-11	ELECT	47uF	20.00% 50V	
C981	1-128-564-11	ELECT	220uF	20.00% 100V	
C982	1-126-964-11	ELECT	10uF	20.00% 50V	
C983	1-126-968-11	ELECT	100uF	20.00% 50V	
C984	1-164-159-11	CERAMIC	0.1uF	50V	
C991	1-136-165-00	MYLAR	0.1uF	5.00% 50V	
C992	1-136-165-00	MYLAR	0.1uF	5.00% 50V	
C993	1-136-165-00	MYLAR	0.1uF	5.00% 50V	
C994	1-136-165-00	MYLAR	0.1uF	5.00% 50V	
		< CONNECTOR >			
CN801	1-691-766-11	PLUG (MICRO CONNECTOR) 4P			
CN803	1-778-982-21	CONNECTOR, BOARD TO BOARD 13P			
CN804	1-778-982-21	CONNECTOR, BOARD TO BOARD 13P			
		< DIODE >			
D801	8-719-911-19	DIODE 1SS133T-72			
D802	8-719-911-19	DIODE 1SS133T-72			
D821	8-719-911-19	DIODE 1SS133T-72			
D831	8-719-911-19	DIODE 1SS133T-72			
D851	8-719-911-19	DIODE 1SS133T-72			
D871	8-719-911-19	DIODE 1SS133T-72			
D881	8-719-911-19	DIODE 1SS133T-72			
D911	8-719-302-38	DIODE RBV-602-01			
D963	8-719-911-19	DIODE 1SS133T-72			
D981	8-719-024-99	DIODE 11ES2-NTA2B			
D982	8-719-079-21	DIODE MTZJ-T-72-20D			
D983	8-719-079-21	DIODE MTZJ-T-72-20D			
D984	8-719-160-56	DIODE RD12F-T7B2			
D991	8-719-024-99	DIODE 11ES2-NTA2B			
D992	8-719-024-99	DIODE 11ES2-NTA2B			
D993	8-719-024-99	DIODE 11ES2-NTA2B			
D994	8-719-024-99	DIODE 11ES2-NTA2B			
D995	8-719-024-99	DIODE 11ES2-NTA2B			
D996	8-719-024-99	DIODE 11ES2-NTA2B			
D997	8-719-024-99	DIODE 11ES2-NTA2B			
D998	8-719-024-99	DIODE 11ES2-NTA2B			

Ref. No.	Part No.	Description			Remarks
		< TERMINAL >			
* EPT951	1-537-738-21	TERMINAL, EARTH			
		< IC >			
IC801	8-749-017-15	IC STK442-120			
		< COIL >			
L811	1-420-872-00	COIL, AIR-CORE(EXCEPT US,CND)			
L861	1-420-872-00	COIL, AIR-CORE(EXCEPT US,CND)			
		< TRANSISTOR >			
Q801	8-729-140-84	TRANSISTOR 2SC1841TP-PAFAEA			
Q821	8-729-231-55	TRANSISTOR 2SC2878AB-TPE2			
Q822	8-729-900-63	TRANSISTOR BN1F4M-TP			
Q841	8-729-140-84	TRANSISTOR 2SC1841TP-PAFAEA			
Q842	8-729-119-78	TRANSISTOR 2SC2785TP-HFE			
Q851	8-729-140-84	TRANSISTOR 2SC1841TP-PAFAEA			
Q871	8-729-231-55	TRANSISTOR 2SC2878AB-TPE2			
Q881	8-729-140-82	TRANSISTOR 2SA988TP-PAFAEA			
Q883	8-729-140-84	TRANSISTOR 2SC1841TP-PAFAEA			
Q891	8-729-140-84	TRANSISTOR 2SC1841TP-PAFAEA			
Q892	8-729-140-84	TRANSISTOR 2SC1841TP-PAFAEA			
Q893	8-729-140-82	TRANSISTOR 2SA988TP-PAFAEA			
Q894	8-729-119-78	TRANSISTOR 2SC2785TP-HFE			
Q895	8-729-119-78	TRANSISTOR 2SC2785TP-HFE			
Q896	8-729-119-78	TRANSISTOR 2SC2785TP-HFE			
Q897	8-729-119-78	TRANSISTOR 2SC2785TP-HFE			
Q961	8-729-140-84	TRANSISTOR 2SC1841TP-PAFAEA			
Q962	8-729-140-82	TRANSISTOR 2SA1376-T-L			
Q963	8-729-140-84	TRANSISTOR 2SC1841TP-PAFAEA			
Q981	8-729-048-52	TRANSISTOR 2SA1932(TP)			
		< RESISTOR >			
R801	1-249-417-11	CARBON	1K	5% 1/4W F	
R802	1-249-438-11	CARBON	56K	5% 1/4W	
R803	1-249-415-11	CARBON	680	5% 1/4W F	
				(EXCEPT US)	
R803	1-249-414-11	CARBON	560	5% 1/4W F	
				(US)	
R804	1-249-438-11	CARBON	56K	5% 1/4W	
⚠R805	1-234-499-21	ENCAPSULATED COMPONENT			
R806	1-249-417-11	CARBON	1K	5% 1/4W F	
R807	1-249-431-11	CARBON	15K	5% 1/4W	
R808	1-249-441-11	CARBON	100K	5% 1/4W	
R809	1-260-076-11	CARBON	10	5% 1/2W	
R811	1-260-076-11	CARBON	10	5% 1/2W	
				(EXCEPT US,CND)	
R812	1-260-076-11	CARBON	10	5% 1/2W	
				(EXCEPT US,CND)	
R814	1-249-437-11	CARBON	47K	5% 1/4W	
R815	1-249-437-11	CARBON	47K	5% 1/4W	
R821	1-260-089-11	CARBON	150	5% 1/2W	
R822	1-260-089-11	CARBON	150	5% 1/2W	
R823	1-260-089-11	CARBON	150	5% 1/2W	
R824	1-260-089-11	CARBON	150	5% 1/2W	
R825	1-249-402-11	CARBON	56	5% 1/4W F	
R826	1-249-417-11	CARBON	1K	5% 1/4W F	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remarks
R827	1-249-433-11	CARBON	22K	5%	1/4W
R828	1-249-417-11	CARBON	1K	5%	1/4W F
R829	1-249-437-11	CARBON	47K	5%	1/4W
R830	1-249-417-11	CARBON	1K	5%	1/4W F
R841	1-249-441-11	CARBON	100K	5%	1/4W
R842	1-249-441-11	CARBON	100K	5%	1/4W
R843	1-249-439-11	CARBON	68K	5%	1/4W
R851	1-249-417-11	CARBON	1K	5%	1/4W F
R852	1-249-438-11	CARBON	56K	5%	1/4W
R853	1-249-415-11	CARBON	680	5%	1/4W F (EXCEPT US)
R853	1-249-414-11	CARBON	560	5%	1/4W F (US)
R854	1-249-438-11	CARBON	56K	5%	1/4W
⚠R855	1-234-499-21	ENCAPSULATED COMPONENT			
R856	1-249-417-11	CARBON	1K	5%	1/4W F
R857	1-249-431-11	CARBON	15K	5%	1/4W
R858	1-249-441-11	CARBON	100K	5%	1/4W
R859	1-260-076-11	CARBON	10	5%	1/2W
R861	1-260-076-11	CARBON	10	5%	1/2W (EXCEPT US,CND)
R862	1-260-076-11	CARBON	10	5%	1/2W (EXCEPT US,CND)
R871	1-260-089-11	CARBON	150	5%	1/2W
R872	1-260-089-11	CARBON	150	5%	1/2W
R873	1-260-089-11	CARBON	150	5%	1/2W
R874	1-260-089-11	CARBON	150	5%	1/2W
R875	1-249-402-11	CARBON	56	5%	1/4W F
R876	1-249-417-11	CARBON	1K	5%	1/4W F
R877	1-249-433-11	CARBON	22K	5%	1/4W
R878	1-249-417-11	CARBON	1K	5%	1/4W F
R879	1-249-441-11	CARBON	100K	5%	1/4W
R880	1-247-903-00	CARBON	1M	5%	1/4W
R881	1-215-893-11	METAL OXIDE	1.5K	5%	2W
R883	1-249-437-11	CARBON	47K	5%	1/4W
R885	1-249-429-11	CARBON	10K	5%	1/4W
R887	1-249-441-11	CARBON	100K	5%	1/4W
R889	1-249-429-11	CARBON	10K	5%	1/4W
R891	1-249-438-11	CARBON	56K	5%	1/4W
R892	1-249-439-11	CARBON	68K	5%	1/4W
R894	1-249-429-11	CARBON	10K	5%	1/4W
R895	1-249-429-11	CARBON	10K	5%	1/4W
R896	1-249-435-11	CARBON	33K	5%	1/4W
R897	1-249-433-11	CARBON	22K	5%	1/4W
R898	1-249-425-11	CARBON	4.7K	5%	1/4W F
R900	1-249-425-11	CARBON	4.7K	5%	1/4W F
⚠R963	1-212-881-11	FUSIBLE	100	5%	1/4W
⚠R964	1-212-881-11	FUSIBLE	100	5%	1/4W
R965	1-249-431-11	CARBON	15K	5%	1/4W
R966	1-249-435-11	CARBON	33K	5%	1/4W
R967	1-249-429-11	CARBON	10K	5%	1/4W
⚠R968	1-202-972-61	FUSIBLE	1	5%	1/4W
R969	1-249-439-11	CARBON	68K	5%	1/4W
R970	1-249-433-11	CARBON	22K	5%	1/4W
R971	1-249-421-11	CARBON	2.2K	5%	1/4W F
R972	1-249-433-11	CARBON	22K	5%	1/4W
R973	1-249-421-11	CARBON	2.2K	5%	1/4W F
R974	1-249-429-11	CARBON	10K	5%	1/4W
R982	1-249-427-11	CARBON	6.8K	5%	1/4W F
R983	1-249-421-11	CARBON	2.2K	5%	1/4W F
R984	1-249-429-11	CARBON	10K	5%	1/4W

Ref. No.	Part No.	Description				Remarks
		< RELAY >				
RY881	1-755-168-11	RELAY				
		< THERMISTOR(POSITIVE) >				
THP841	1-807-796-11	THERMISTOR				
		< TERMINAL >				
TM801	1-694-677-11	TERMINAL BOARD (4P)(FRONT SPEAKER)				
TM802	1-694-677-11	TERMINAL BOARD (4P)(SURROUND SPEAKER)				
**********						
	1-676-971-11	HP BOARD				
		*********				
		< CAPACITOR >				
C1691	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C1692	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C1693	1-164-159-11	CERAMIC	0.1uF		50V	
		< CONNECTOR >				
CN1691	1-785-316-51	PIN, CONNECTOR (STRAIGHT) 4P				
		< TERMINAL >				
* EPT169	1-537-738-21	TERMINAL, EARTH				
		< JACK >				
J1691	1-793-829-11	JACK, HEADPHONE(PHONES)				
**********						
	1-671-505-11	IN SW BOARD				
		**********				
		< CONNECTOR >				
* CN710	1-568-941-11	PIN, CONNECTOR 3P				
		< SWITCH >				
S703	1-771-218-11	SWITCH, MICRO(MID IN SW)				
S704	1-771-218-11	SWITCH, MICRO(IN SW)				
**********						
	1-671-502-11	INT/COUNT SW BOARD				
		**********				
S705	1-771-264-11	SWITCH, PUSH(DETECTION)(1 KEY)(INIT SW)				
S706	1-771-264-11	SWITCH, PUSH(DETECTION)(1 KEY) (COUNT SW)				
**********						
	A-2007-838-A	LEAF SW BOARD, COMPLETE				
		**********				
		< CAPACITOR >				
C1001	1-107-716-11	ELECT	33uF	20.00%	10V	
		< CONNECTOR >				
CN1001	1-568-860-21	SOCKET, CONNECTOR 17P				

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

LEAF SW **LOAD MOTOR** **MAIN**

Ref. No.	Part No.	Description				Remarks
		< DIODE >				
D1001	8-719-911-19	DIODE 1SS133T-72				
D1002	8-719-911-19	DIODE 1SS133T-72				
		< IC >				
IC1001	8-749-016-76	IC RPI-321				
IC1002	8-749-016-76	IC RPI-321				
		< TRANSISTOR >				
Q1001	8-729-029-56	TRANSISTOR DTA144ESA-TP				
		< RESISTOR >				
R907	1-247-879-11	CARBON	100K	5%	1/4W	
R1001	1-249-409-11	CARBON	220	5%	1/4W	F
R1002	1-249-409-11	CARBON	220	5%	1/4W	F
R1003	1-249-414-11	CARBON	560	5%	1/4W	F
R1004	1-247-834-11	CARBON	1.3K	5%	1/4W	
R1005	1-247-818-11	CARBON	300	5%	1/4W	
R1006	1-247-864-11	CARBON	24K	5%	1/4W	
R1007	1-247-780-00	CARBON	7.5	5%	1/4W	
R1008	1-249-417-11	CARBON	1K	5%	1/4W	F
		< VARIABLE RESISTOR >				
RV1001	1-241-785-11	RES, ADJ, CARBON 10K				
RV1002	1-241-785-11	RES, ADJ, CARBON 10K				
		< SWITCH >				
S1001	1-570-953-11	SWITCH, PUSH (1 KEY)(DECK A PLAY)				
S1002	1-570-953-11	SWITCH, PUSH (1 KEY)(DECK B PLAY)				
S1003	1-771-333-11	SWITCH, LEAF(DECK A HALF)				
S1004	1-771-536-11	SWITCH, LEAF(DECK A 120/70)				
S1005	1-771-536-11	SWITCH, LEAF(DECK A REC)				
S1006	1-771-333-11	SWITCH, LEAF(DECK B HALF)				
S1008	1-771-536-11	SWITCH, LEAF(DECK B 120/70)				
S1009	1-771-536-11	SWITCH, LEAF(DECK B REC)				
**********						
	1-671-508-11	LOAD MOTOR BOARD				
		**********				
		< CAPACITOR >				
C703	1-162-306-11	CERAMIC	0.01uF	30.00%	16V	
C704	1-126-964-11	ELECT	10uF	20.00%	50V	
C712	1-162-306-11	CERAMIC	0.01uF	30.00%	16V	
		< CONNECTOR >				
CN713	1-506-469-11	PIN, CONNECTOR 4P				
		< DIODE >				
D702	8-719-109-85	DIODE MTZJ-T-72-5.1B				
		< IC >				
IC702	8-759-633-65	IC M54641L				
		< RESISTOR >				
R703	1-249-411-11	CARBON	330	5%	1/4W	
R704	1-249-401-11	CARBON	47	5%	1/4W	F
**********						

Ref. No.	Part No.	Description				Remarks
	A-4428-653-A	MAIN BOARD, COMPLETE (US,CND)				
		**********				
	A-4428-668-A	MAIN BOARD, COMPLETE (EXCEPT US,CND)				
		**********				
	4-875-327-31	HEAT SINK				
	7-685-646-79	SCREW +BVTP	3X8	TYPE2 N-S		
		< CAPACITOR >				
C103	1-126-960-11	ELECT	1uF	20.00%	50V	
C107	1-136-157-00	MYLAR	0.022uF	5.00%	50V	
C108	1-136-157-00	MYLAR	0.022uF	5.00%	50V	
C109	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V	
C110	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V	
C111	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V	
C112	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V	
C113	1-126-964-11	ELECT	10uF	20.00%	50V	
C114	1-136-495-11	MYLAR	0.068uF	5.00%	50V	
C115	1-130-481-00	MYLAR	0.0068uF	5%	50V	
C116	1-130-481-00	MYLAR	0.0068uF	5%	50V	
C117	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V	
C118	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V	
C119	1-136-159-00	MYLAR	0.033uF	5.00%	50V	
C120	1-126-964-11	ELECT	10uF	20.00%	50V	
C121	1-126-964-11	ELECT	10uF	20.00%	50V	
C122	1-136-165-00	MYLAR	0.1uF	5.00%	50V	
C123	1-136-165-00	MYLAR	0.1uF	5.00%	50V	
C124	1-126-960-11	ELECT	1uF	20.00%	50V	
C125	1-104-665-11	ELECT	100uF	20.00%	10V	
C126	1-136-165-00	MYLAR	0.1uF	5.00%	50V	
C127	1-104-664-11	ELECT	47uF	20.00%	16V	
C128	1-104-664-11	ELECT	47uF	20.00%	16V	
C129	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	
C132	1-163-038-91	CERAMIC CHIP	0.1uF		25V	
C136	1-126-964-11	ELECT	10uF	20.00%	50V	
C137	1-163-038-91	CERAMIC CHIP	0.1uF		25V	
C138	1-163-038-91	CERAMIC CHIP	0.1uF		25V	
C142	1-163-001-11	CERAMIC CHIP	220PF	10%	50V	(EXCEPT US,CND)
C144	1-163-001-11	CERAMIC CHIP	220PF	10%	50V	(EXCEPT US,CND)
C146	1-163-001-11	CERAMIC CHIP	220PF	10%	50V	(EXCEPT US,CND)
C153	1-126-960-11	ELECT	1uF	20.00%	50V	
C155	1-126-964-11	ELECT	10uF	20.00%	50V	
C157	1-136-157-00	MYLAR	0.022uF	5.00%	50V	
C158	1-136-157-00	MYLAR	0.022uF	5.00%	50V	
C159	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V	
C160	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V	
C161	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V	
C162	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V	
C163	1-126-964-11	ELECT	10uF	20.00%	50V	
C164	1-136-495-11	MYLAR	0.068uF	5.00%	50V	
C165	1-130-481-00	MYLAR	0.0068uF	5%	50V	
C166	1-130-481-00	MYLAR	0.0068uF	5%	50V	
C167	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V	
C168	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V	
C169	1-136-159-00	MYLAR	0.033uF	5.00%	50V	
C170	1-126-964-11	ELECT	10uF	20.00%	50V	
C171	1-126-964-11	ELECT	10uF	20.00%	50V	

Ref. No.	Part No.	Description			Remarks
C172	1-136-165-00	MYLAR	0.1uF	5.00%	50V
C173	1-136-165-00	MYLAR	0.1uF	5.00%	50V
C174	1-126-960-11	ELECT	1uF	20.00%	50V
C175	1-104-665-11	ELECT	100uF	20.00%	10V
C181	1-109-889-11	ELECT	1uF	20.00%	50V
C192	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
				(EXCEPT US,CND)	
C194	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
				(EXCEPT US,CND)	
C196	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
				(EXCEPT US,CND)	
C197	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C287	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C291	1-126-960-11	ELECT	1uF	20.00%	50V
C292	1-126-960-11	ELECT	1uF	20.00%	50V
C293	1-126-960-11	ELECT	1uF	20.00%	50V
C294	1-126-960-11	ELECT	1uF	20.00%	50V
C295	1-104-664-11	ELECT	47uF	20.00%	16V
C296	1-163-021-91	CERAMIC CHIP	0.01uF	10.00%	50V
C297	1-126-963-11	ELECT	4.7uF	20.00%	50V
C298	1-107-725-11	CERAMIC CHIP	0.1uF	10.00%	16V
C299	1-126-963-11	ELECT	4.7uF	20.00%	50V
C301	1-126-960-11	ELECT	1uF	20.00%	50V
C302	1-130-479-00	MYLAR	0.0047uF	5%	50V
C303	1-136-165-00	MYLAR	0.1uF	5.00%	50V
C304	1-136-165-00	MYLAR	0.1uF	5.00%	50V
C305	1-126-964-11	ELECT	10uF	20.00%	50V
C306	1-126-960-11	ELECT	1uF	20.00%	50V
C307	1-126-959-11	ELECT	0.47uF	20.00%	50V
C308	1-126-964-11	ELECT	10uF	20.00%	50V
C309	1-137-194-81	MYLAR	0.47uF	5.00%	50V
C310	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C311	1-126-964-11	ELECT	10uF	20.00%	50V
C312	1-126-959-11	ELECT	0.47uF	20.00%	50V
C313	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C314	1-126-964-11	ELECT	10uF	20.00%	50V
C315	1-126-963-11	ELECT	4.7uF	20.00%	50V
C316	1-126-933-11	ELECT	100uF	20.00%	16V
C317	1-104-665-11	ELECT	100uF	20.00%	10V
C318	1-126-959-11	ELECT	0.47uF	20.00%	50V
C319	1-126-959-11	ELECT	0.47uF	20.00%	50V
C321	1-126-964-11	ELECT	10uF	20.00%	50V
C322	1-126-964-11	ELECT	10uF	20.00%	50V
C351	1-126-960-11	ELECT	1uF	20.00%	50V
C352	1-130-479-00	MYLAR	0.0047uF	5%	50V
C353	1-136-165-00	MYLAR	0.1uF	5.00%	50V
C354	1-136-165-00	MYLAR	0.1uF	5.00%	50V
C355	1-126-964-11	ELECT	10uF	20.00%	50V
C356	1-126-960-11	ELECT	1uF	20.00%	50V
C357	1-126-959-11	ELECT	0.47uF	20.00%	50V
C358	1-126-964-11	ELECT	10uF	20.00%	50V
C359	1-137-194-81	MYLAR	0.47uF	5.00%	50V
C360	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C362	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C363	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C368	1-126-959-11	ELECT	0.47uF	20.00%	50V
C369	1-126-959-11	ELECT	0.47uF	20.00%	50V
C410	1-163-233-11	CERAMIC CHIP	18PF	5.00%	50V
C411	1-163-233-11	CERAMIC CHIP	18PF	5.00%	50V
C414	1-163-038-91	CERAMIC CHIP	0.1uF		25V

Ref. No.	Part No.	Description			Remarks
C416	1-126-916-11	ELECT	1000uF	20.00%	6.3V
C462	1-104-665-11	ELECT	100uF	20.00%	10V
C464	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C497	1-126-964-11	ELECT	10uF	20.00%	50V
C498	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C499	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C501	1-136-165-00	MYLAR	0.1uF	5.00%	50V
C502	1-136-165-00	MYLAR	0.1uF	5.00%	50V
C503	1-126-964-11	ELECT	10uF	20.00%	50V
C511	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C521	1-104-665-11	ELECT	100uF	20.00%	10V
C531	1-163-033-91	CERAMIC CHIP	0.022uF	50V	
C532	1-126-935-11	ELECT	470uF	20.00%	6.3V
C533	1-163-033-91	CERAMIC CHIP	0.022uF	50V	
C534	1-126-916-11	ELECT	1000uF	20.00%	6.3V
C536	1-126-925-11	ELECT	470uF	20.00%	10V
C551	1-104-665-11	ELECT	100uF	20.00%	10V
C901	1-126-937-11	ELECT	4700uF	20.00%	16V
C902	1-126-768-11	ELECT	2200uF	20.00%	16V
C903	1-126-964-11	ELECT	10uF	20.00%	50V
C904	1-126-964-11	ELECT	10uF	20.00%	50V
C905	1-126-964-11	ELECT	10uF	20.00%	50V
C906	1-126-964-11	ELECT	10uF	20.00%	50V
C907	1-126-924-11	ELECT	330uF	20.00%	6.3V
C908	1-126-924-11	ELECT	330uF	20.00%	6.3V
C909	1-126-964-11	ELECT	10uF	20.00%	50V
C911	1-126-916-11	ELECT	1000uF	20.00%	6.3V
C912	1-104-665-11	ELECT	100uF	20.00%	10V
C914	1-126-916-11	ELECT	1000uF	20.00%	6.3V
C915	1-126-916-11	ELECT	1000uF	20.00%	6.3V
C920	1-126-943-11	ELECT	2200uF	20.00%	25V
C921	1-126-956-91	ELECT	0.1uF	20.00%	50V
C922	1-126-767-11	ELECT	1000uF	20.00%	16V
C924	1-126-956-91	ELECT	0.1uF	20.00%	50V
C925	1-126-935-11	ELECT	470uF	20.00%	16V
C931	1-126-964-11	ELECT	10uF	20.00%	50V
C932	1-126-935-11	ELECT	470uF	20.00%	16V
C941	1-163-038-91	CERAMIC CHIP	0.1uF		25V

< CONNECTOR >

CN304	1-784-778-11	CONNECTOR, FFC 17P	
CN305	1-784-776-11	CONNECTOR, FFC 15P	
CN502	1-784-776-11	CONNECTOR, FFC 15P(EXCEPT US,CND)	
CN502	1-784-774-11	CONNECTOR, FFC 13P(US,CND)	
CN503	1-568-830-11	CONNECTOR, FFC 11P	
CN521	1-785-316-11	PIN, CONNECTOR (STRAIGHT) 4P	
CN522	1-784-739-11	CONNECTOR, FFC 17P	
CN523	1-784-741-11	CONNECTOR, FFC 19P	
CN901	1-778-981-21	CONNECTOR, BOARD TO BOARD 13P	
CN902	1-778-981-21	CONNECTOR, BOARD TO BOARD 13P	
* CN941	1-564-518-11	PLUG, CONNECTOR 3P	

< DIODE >

D101	8-719-988-61	DIODE 1SS355TE-17
D102	8-719-988-61	DIODE 1SS355TE-17
D181	8-719-988-61	DIODE 1SS355TE-17
D182	8-719-988-61	DIODE 1SS355TE-17
D183	8-719-988-61	DIODE 1SS355TE-17
D501	8-719-988-61	DIODE 1SS355TE-17

MAIN

Ref. No.	Part No.	Description	Remarks
D502	8-719-988-61	DIODE 1SS355TE-17	
D503	8-719-988-61	DIODE 1SS355TE-17	
D504	8-719-988-61	DIODE 1SS355TE-17	
D505	8-719-988-61	DIODE 1SS355TE-17	
D506	8-719-988-61	DIODE 1SS355TE-17	
D507	8-719-210-33	DIODE EC10DS2-TE12L5	
D508	8-719-988-61	DIODE 1SS355TE-17	
D509	8-719-988-61	DIODE 1SS355TE-17	
D510	8-719-988-61	DIODE 1SS355TE-17	
D512	8-719-210-33	DIODE EC10DS2-TE12L5	
D912	8-719-210-33	DIODE EC10DS2-TE12L5	
D913	8-719-210-33	DIODE EC10DS2-TE12L5	
D914	8-719-210-33	DIODE EC10DS2-TE12L5	
D951	8-719-988-61	DIODE 1SS355TE-17	
D952	8-719-210-33	DIODE EC10DS2-TE12L5	
		< TERMINAL >	
* EP901	1-537-738-21	TERMINAL, EARTH	
* EP902	1-537-738-21	TERMINAL, EARTH	
		< FERRITE BEAD >	
FB416	1-414-772-11	FERRITE 0UH	
FB462	1-414-772-11	FERRITE 0UH	
FB499	1-414-772-11	FERRITE 0UH	
FB532	1-414-551-11	FERRITE 0UH	
FB533	1-414-772-11	FERRITE 0UH	
FB534	1-414-772-11	FERRITE 0UH	
		< IC >	
IC101	8-759-663-66	IC M61502FP	
IC202	8-759-652-01	IC LA2615	
IC301	8-759-652-02	IC HA12226F	
IC401	8-759-664-39	IC M30620MCA-A35FP	
IC501	8-759-635-63	IC M51943BSL-TP	
IC551	8-749-923-04	IC TOTX178A(CD DIGITAL OUT OPTICAL)	
IC901	8-759-231-53	IC M5F7805L	
IC902	8-759-701-65	IC M5F79M05L	
IC903	8-759-158-62	IC TA78057S	
IC905	8-759-464-03	IC uPC29M12HF	
IC906	8-759-604-86	IC M5F7807L	
IC907	8-759-604-32	IC M5F7810L	
		< JACK >	
J101	1-774-411-11	JACK, PIN 6P(VIDEO(AUDIO) IN,MD IN/OUT)	
J102	1-770-377-31	JACK, PIN 1P(WOOFER OUT)	
		< JUMPER RESISTOR >	
JR1	1-216-295-91	SHORT 0	
JR2	1-216-295-91	SHORT 0	
JR3	1-216-295-91	SHORT 0	
JR7	1-216-295-91	SHORT 0	
JR9	1-216-296-91	SHORT 0	
JR10	1-216-296-91	SHORT 0	
JR12	1-216-295-91	SHORT 0	
JR13	1-216-296-91	SHORT 0	
JR14	1-216-295-91	SHORT 0	
JR17	1-216-295-91	SHORT 0	
JR21	1-216-295-91	SHORT 0	
JR24	1-216-296-91	SHORT 0	
JR25	1-216-296-91	SHORT 0	
JR26	1-216-295-91	SHORT 0	
JR27	1-216-295-91	SHORT 0	
JR29	1-216-296-91	SHORT 0	
JR30	1-216-295-91	SHORT 0	
JR31	1-216-296-91	SHORT 0	
JR32	1-216-295-91	SHORT 0	
JR34	1-216-296-91	SHORT 0	
JR35	1-216-296-91	SHORT 0	
JR36	1-216-296-91	SHORT 0	
JR37	1-216-296-91	SHORT 0	
JR38	1-216-296-91	SHORT 0	
JR39	1-216-296-91	SHORT 0	
JR40	1-216-296-91	SHORT 0	
JR41	1-216-296-91	SHORT 0	
JR42	1-216-296-91	SHORT 0	
JR43	1-216-295-91	SHORT 0	
JR44	1-216-296-91	SHORT 0	
JR45	1-216-295-91	SHORT 0	
JR47	1-216-296-91	SHORT 0	
JR48	1-216-296-91	SHORT 0	
JR49	1-216-296-91	SHORT 0	
JR50	1-216-296-91	SHORT 0	
JR51	1-216-295-91	SHORT 0	
JR52	1-216-295-91	SHORT 0	
JR53	1-216-295-91	SHORT 0	
JR54	1-216-295-91	SHORT 0	
JR55	1-216-296-91	SHORT 0	
JR101	1-216-295-91	SHORT 0	
JR501	1-216-295-91	SHORT 0 (EXCEPT US,CND)	
JR502	1-216-295-91	SHORT 0 (EXCEPT US,CND)	
JR503	1-216-295-91	SHORT 0 (EXCEPT US,CND)	
JR511	1-216-295-91	SHORT 0	
JR901	1-216-296-91	SHORT 0	
JR923	1-216-296-91	SHORT 0 (US,CND)	
JR924	1-216-296-91	SHORT 0 (US,CND)	
		< COIL >	
L551	1-410-393-11	INDUCTOR CHIP 100uH	
L552	1-410-393-11	INDUCTOR CHIP 100uH	
		< TRANSISTOR >	
Q101	8-729-120-28	TRANSISTOR 2SC3052EF-T1-LEF	
Q102	8-729-141-30	TRANSISTOR 2SC3623ATP-LK	
Q130	8-729-141-30	TRANSISTOR 2SC3623ATP-LK	
Q151	8-729-120-28	TRANSISTOR 2SC3052EF-T1-LEF	
Q152	8-729-141-30	TRANSISTOR 2SC3623ATP-LK	
Q181	8-729-900-53	TRANSISTOR DTC114EKA-T146	
Q182	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q183	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q184	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q391	8-729-140-04	TRANSISTOR 2SB1116-TP-LK	
Q392	8-729-900-53	TRANSISTOR DTC114EKA-T146	
Q393	8-729-140-04	TRANSISTOR 2SB1116-TP-LK	
Q394	8-729-900-53	TRANSISTOR DTC114EKA-T146	
Q395	8-729-900-53	TRANSISTOR DTC114EKA-T146	
Q396	8-729-116-59	TRANSISTOR 2SB1068TP	
Q397	8-729-900-53	TRANSISTOR DTC114EKA-T146	
Q501	8-729-120-28	TRANSISTOR 2SC3052EF-T1-LEF	

Ref. No.	Part No.	Description			Remarks
Q901	8-729-040-20	TRANSISTOR RT1P137L-TP			
Q902	8-729-027-31	TRANSISTOR DTA124EKA-T146			
Q903	8-729-040-19	TRANSISTOR RT1N137L-TP			
Q904	8-729-901-00	TRANSISTOR DTC124EKA-T146			
Q905	8-729-600-22	TRANSISTOR 2SA1235TP-1EF			
Q906	8-729-027-44	TRANSISTOR DTC114TKA-T146			
Q910	8-729-040-20	TRANSISTOR RT1P137L-TP			
Q911	8-729-901-00	TRANSISTOR DTC124EKA-T146			
Q912	8-729-900-53	TRANSISTOR DTC114EKA-T146			
Q913	8-729-040-20	TRANSISTOR RT1P137L-TP			
Q921	8-729-052-12	TRANSISTOR 2SB1568			
Q922	8-729-900-53	TRANSISTOR DTC114EKA-T146			
Q941	8-729-111-29	TRANSISTOR 2SD1616A-TP-LK			
Q942	8-729-600-22	TRANSISTOR 2SA1235TP-1EF			
		< RESISTOR >			
R101	1-216-073-00	METAL CHIP	10K	5%	1/10W
R102	1-216-073-00	METAL CHIP	10K	5%	1/10W
R103	1-216-073-00	METAL CHIP	10K	5%	1/10W
R104	1-216-121-91	RES-CHIP	1M	5%	1/10W
R105	1-216-113-00	METAL CHIP	470K	5%	1/10W
R106	1-216-081-00	METAL CHIP	22K	5%	1/10W
R107	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R109	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R110	1-216-097-91	RES-CHIP	100K	5%	1/10W
R111	1-216-089-91	RES-CHIP	47K	5%	1/10W
R112	1-216-073-00	METAL CHIP	10K	5%	1/10W
R121	1-216-025-91	RES-CHIP	100	5%	1/10W
R122	1-216-025-91	RES-CHIP	100	5%	1/10W
R123	1-216-025-91	RES-CHIP	100	5%	1/10W
R124	1-216-073-00	METAL CHIP	10K	5%	1/10W
R131	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R132	1-216-049-91	RES-CHIP	1K	5%	1/10W
R133	1-216-097-91	RES-CHIP	100K	5%	1/10W
R134	1-216-073-00	METAL CHIP	10K	5%	1/10W
R141	1-216-049-91	RES-CHIP	1K	5%	1/10W
R142	1-216-097-91	RES-CHIP	100K	5%	1/10W
R143	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R144	1-216-077-91	RES-CHIP	15K	5%	1/10W
R145	1-216-049-91	RES-CHIP	1K	5%	1/10W
R146	1-216-097-91	RES-CHIP	100K	5%	1/10W
R151	1-216-073-00	METAL CHIP	10K	5%	1/10W
R152	1-216-073-00	METAL CHIP	10K	5%	1/10W
R153	1-216-073-00	METAL CHIP	10K	5%	1/10W
R154	1-216-121-91	RES-CHIP	1M	5%	1/10W
R155	1-216-113-00	METAL CHIP	470K	5%	1/10W
R156	1-216-081-00	METAL CHIP	22K	5%	1/10W
R157	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R159	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R160	1-216-097-91	RES-CHIP	100K	5%	1/10W
R161	1-216-089-91	RES-CHIP	47K	5%	1/10W
R162	1-216-073-00	METAL CHIP	10K	5%	1/10W
R181	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R182	1-216-097-91	RES-CHIP	100K	5%	1/10W
R183	1-216-097-91	RES-CHIP	100K	5%	1/10W
R191	1-216-049-91	RES-CHIP	1K	5%	1/10W
R192	1-216-097-91	RES-CHIP	100K	5%	1/10W
R193	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R194	1-216-077-91	RES-CHIP	15K	5%	1/10W
R195	1-216-049-91	RES-CHIP	1K	5%	1/10W

Ref. No.	Part No.	Description			Remarks
R196	1-216-097-91	RES-CHIP	100K	5%	1/10W
R291	1-216-049-91	RES-CHIP	1K	5%	1/10W
R292	1-216-049-91	RES-CHIP	1K	5%	1/10W
R301	1-216-085-00	METAL CHIP	33K	5%	1/10W
R302	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R303	1-216-025-91	RES-CHIP	100	5%	1/10W
R304	1-216-025-91	RES-CHIP	100	5%	1/10W
R305	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R306	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R307	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R308	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R309	1-216-081-00	METAL CHIP	22K	5%	1/10W
R311	1-216-121-91	RES-CHIP	1M	5%	1/10W
R312	1-216-102-00	RES-CHIP	160K	5%	1/10W
R313	1-216-097-91	RES-CHIP	100K	5%	1/10W
R315	1-216-073-00	METAL CHIP	10K	5%	1/10W
R316	1-216-086-00	RES-CHIP	36K	5%	1/10W
R317	1-216-073-00	METAL CHIP	10K	5%	1/10W
R318	1-216-073-00	METAL CHIP	10K	5%	1/10W
R319	1-216-111-00	METAL CHIP	390K	5%	1/10W
R320	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R321	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R323	1-216-089-91	RES-CHIP	47K	5%	1/10W
R324	1-216-089-91	RES-CHIP	47K	5%	1/10W
R351	1-216-085-00	METAL CHIP	33K	5%	1/10W
R352	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R353	1-216-025-91	RES-CHIP	100	5%	1/10W
R354	1-216-025-91	RES-CHIP	100	5%	1/10W
R355	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R356	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R357	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R358	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R359	1-216-085-00	METAL CHIP	33K	5%	1/10W
R360	1-216-045-00	METAL CHIP	680	5%	1/10W
R361	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R363	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R364	1-216-045-00	METAL CHIP	680	5%	1/10W
R366	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R367	1-216-089-91	RES-CHIP	47K	5%	1/10W
R368	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R369	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R371	1-216-238-91	RES-CHIP	47K	5%	1/8W
R372	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R373	1-216-049-91	RES-CHIP	1K	5%	1/10W
R374	1-216-089-91	RES-CHIP	47K	5%	1/10W
R375	1-216-094-00	RES-CHIP	75K	5%	1/10W
R376	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R377	1-216-089-91	RES-CHIP	47K	5%	1/10W
R378	1-216-094-00	RES-CHIP	75K	5%	1/10W
R400	1-216-025-91	RES-CHIP	100	5%	1/10W
R401	1-216-025-91	RES-CHIP	100	5%	1/10W
R402	1-216-025-91	RES-CHIP	100	5%	1/10W
R403	1-216-025-91	RES-CHIP	100	5%	1/10W
R404	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R406	1-216-025-91	RES-CHIP	100	5%	1/10W
R407	1-216-025-91	RES-CHIP	100	5%	1/10W
R408	1-216-025-91	RES-CHIP	100	5%	1/10W
R409	1-216-073-00	METAL CHIP	10K	5%	1/10W
R411	1-216-109-00	METAL CHIP	330K	5%	1/10W
R412	1-216-025-91	RES-CHIP	100	5%	1/10W

MAIN **OUT SW** **PANEL**

Ref. No.	Part No.	Description			Remarks
R413	1-216-295-91	SHORT	0		
R416	1-216-073-00	METAL CHIP	10K	5%	1/10W
R417	1-216-073-00	METAL CHIP	10K	5%	1/10W
R418	1-216-025-91	RES-CHIP	100	5%	1/10W
R419	1-216-025-91	RES-CHIP	100	5%	1/10W
R420	1-216-025-91	RES-CHIP	100	5%	1/10W (EXCEPT US,CND)
R421	1-216-025-91	RES-CHIP	100	5%	1/10W (EXCEPT US,CND)
R422	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R423	1-216-025-91	RES-CHIP	100	5%	1/10W
R424	1-216-025-91	RES-CHIP	100	5%	1/10W
R425	1-216-025-91	RES-CHIP	100	5%	1/10W
R426	1-216-025-91	RES-CHIP	100	5%	1/10W
R429	1-216-001-00	METAL CHIP	10	5%	1/10W
R430	1-216-001-00	METAL CHIP	10	5%	1/10W
R431	1-216-025-91	RES-CHIP	100	5%	1/10W
R432	1-216-025-91	RES-CHIP	100	5%	1/10W
R433	1-216-025-91	RES-CHIP	100	5%	1/10W
R434	1-216-025-91	RES-CHIP	100	5%	1/10W
R435	1-216-025-91	RES-CHIP	100	5%	1/10W
R436	1-216-073-00	METAL CHIP	10K	5%	1/10W
R437	1-216-073-00	METAL CHIP	10K	5%	1/10W
R438	1-216-049-91	RES-CHIP	1K	5%	1/10W
R439	1-216-073-00	METAL CHIP	10K	5%	1/10W
R440	1-216-222-00	RES-CHIP	10K	5%	1/8W
R446	1-216-025-91	RES-CHIP	100	5%	1/10W
R447	1-216-025-91	RES-CHIP	100	5%	1/10W
R448	1-216-025-91	RES-CHIP	100	5%	1/10W
R449	1-216-025-91	RES-CHIP	100	5%	1/10W
R450	1-216-025-91	RES-CHIP	100	5%	1/10W
R451	1-216-025-91	RES-CHIP	100	5%	1/10W
R452	1-216-025-91	RES-CHIP	100	5%	1/10W
R453	1-216-073-00	METAL CHIP	10K	5%	1/10W
R454	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R455	1-216-073-00	METAL CHIP	10K	5%	1/10W
R463	1-216-025-91	RES-CHIP	100	5%	1/10W
R469	1-216-025-91	RES-CHIP	100	5%	1/10W
R470	1-216-025-91	RES-CHIP	100	5%	1/10W
R471	1-216-174-00	RES-CHIP	100	5%	1/8W
R472	1-216-025-91	RES-CHIP	100	5%	1/10W
R473	1-216-025-91	RES-CHIP	100	5%	1/10W
R474	1-216-025-91	RES-CHIP	100	5%	1/10W
R475	1-216-025-91	RES-CHIP	100	5%	1/10W
R476	1-216-025-91	RES-CHIP	100	5%	1/10W
R477	1-216-025-91	RES-CHIP	100	5%	1/10W
R478	1-216-025-91	RES-CHIP	100	5%	1/10W
R479	1-216-025-91	RES-CHIP	100	5%	1/10W
R480	1-216-025-91	RES-CHIP	100	5%	1/10W
R481	1-216-025-91	RES-CHIP	100	5%	1/10W
R482	1-216-025-91	RES-CHIP	100	5%	1/10W
R483	1-216-025-91	RES-CHIP	100	5%	1/10W
R484	1-216-025-91	RES-CHIP	100	5%	1/10W
R485	1-216-025-91	RES-CHIP	100	5%	1/10W
R486	1-216-025-91	RES-CHIP	100	5%	1/10W
R487	1-216-025-91	RES-CHIP	100	5%	1/10W
R488	1-216-295-91	SHORT	0		
R489	1-216-025-91	RES-CHIP	100	5%	1/10W
R490	1-216-025-91	RES-CHIP	100	5%	1/10W
R491	1-216-025-91	RES-CHIP	100	5%	1/10W

Ref. No.	Part No.	Description			Remarks
R493	1-216-085-00	METAL CHIP	33K	5%	1/10W (EXCEPT US,CND)
R493	1-216-073-00	METAL CHIP	10K	5%	1/10W (US,CND)
R494	1-216-089-91	RES-CHIP	47K	5%	1/10W
R495	1-216-025-91	RES-CHIP	100	5%	1/10W
R497	1-216-025-91	RES-CHIP	100	5%	1/10W
R501	1-216-073-00	METAL CHIP	10K	5%	1/10W
R502	1-216-089-91	RES-CHIP	47K	5%	1/10W
R503	1-216-089-91	RES-CHIP	47K	5%	1/10W
R504	1-216-025-91	RES-CHIP	100	5%	1/10W
R505	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R506	1-216-041-00	METAL CHIP	470	5%	1/10W
R521	1-216-222-00	RES-CHIP	10K	5%	1/8W
R522	1-216-222-00	RES-CHIP	10K	5%	1/8W
R523	1-216-222-00	RES-CHIP	10K	5%	1/8W
R524	1-216-222-00	RES-CHIP	10K	5%	1/8W
R525	1-216-073-00	METAL CHIP	10K	5%	1/10W
R526	1-216-073-00	METAL CHIP	10K	5%	1/10W
R527	1-216-073-00	METAL CHIP	10K	5%	1/10W
R528	1-216-073-00	METAL CHIP	10K	5%	1/10W
R529	1-216-073-00	METAL CHIP	10K	5%	1/10W
R530	1-216-073-00	METAL CHIP	10K	5%	1/10W
R531	1-216-073-00	METAL CHIP	10K	5%	1/10W
R541	1-216-025-91	RES-CHIP	100	5%	1/10W
R542	1-216-025-91	RES-CHIP	100	5%	1/10W
R901	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R902	1-216-081-00	METAL CHIP	22K	5%	1/10W
R903	1-216-049-91	RES-CHIP	1K	5%	1/10W
R907	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R941	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R942	1-216-097-91	RES-CHIP	100K	5%	1/10W
R943	1-216-065-91	RES-CHIP	4.7K	5%	1/10W

< VARIABLE RESISTOR >

RV301	1-238-600-11	RES, ADJ, CARBON 10K
RV351	1-238-600-11	RES, ADJ, CARBON 10K

< VIBRATOR >

X401	1-567-098-41	VIBRATOR, CRYSTAL(32.768KHz)
X402	1-781-107-21	VIBRATOR, CERAMIC(16MHz)

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1-671-503-11 OUT SW BOARD

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< CONNECTOR >

* CN709	1-568-943-11	PIN, CONNECTOR 5P
CN715	1-506-481-11	PIN, CONNECTOR 2P

< SWITCH >

S701	1-771-218-11	SWITCH, MICRO(MID OUT SW)
S702	1-771-218-11	SWITCH, MICRO(LID SW)
S708	1-771-218-11	SWITCH, MICRO(OUT SW)

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A-4428-655-A PANEL BOARD, COMPLETE

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4-226-723-01 HOLDER (FL)

4-949-935-41 CUSHION (FL)

Ref. No.	Part No.	Description				Remarks
		< CAPACITOR >				
C691	1-162-286-31	CERAMIC	220PF	10%	50V	
C692	1-162-286-31	CERAMIC	220PF	10%	50V	
C701	1-162-306-11	CERAMIC	0.01uF	30.00%	16V	
C702	1-124-589-11	ELECT	47uF	20%	16V	
C703	1-162-290-31	CERAMIC	470PF	10%	50V	
C704	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C705	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C706	1-162-282-31	CERAMIC	100PF	10%	50V	
C711	1-162-286-31	CERAMIC	220PF	10%	50V	
C712	1-162-286-31	CERAMIC	220PF	10%	50V	
C713	1-162-286-31	CERAMIC	220PF	10%	50V	
C714	1-162-286-31	CERAMIC	220PF	10%	50V	
C715	1-162-286-31	CERAMIC	220PF	10%	50V	
C716	1-162-286-31	CERAMIC	220PF	10%	50V	
C717	1-162-286-31	CERAMIC	220PF	10%	50V	
C718	1-162-286-31	CERAMIC	220PF	10%	50V	
C719	1-162-286-31	CERAMIC	220PF	10%	50V	
C720	1-162-286-31	CERAMIC	220PF	10%	50V	
C721	1-162-286-31	CERAMIC	220PF	10%	50V	
C722	1-162-286-31	CERAMIC	220PF	10%	50V	
C723	1-162-286-31	CERAMIC	220PF	10%	50V	
C724	1-162-286-31	CERAMIC	220PF	10%	50V	
C725	1-162-286-31	CERAMIC	220PF	10%	50V	
C726	1-162-286-31	CERAMIC	220PF	10%	50V	
C727	1-162-286-31	CERAMIC	220PF	10%	50V	
C728	1-162-286-31	CERAMIC	220PF	10%	50V	
C731	1-124-261-00	ELECT	10uF	20%	50V	
C732	1-124-261-00	ELECT	10uF	20%	50V	
C751	1-162-306-11	CERAMIC	0.01uF	30.00%	16V	
C752	1-124-589-11	ELECT	47uF	20%	16V	
C755	1-162-306-11	CERAMIC	0.01uF	30.00%	16V	
C756	1-124-261-00	ELECT	10uF	20%	50V	
C757	1-162-290-31	CERAMIC	470PF	10%	50V	
C761	1-162-306-11	CERAMIC	0.01uF	30.00%	16V	
C762	1-124-261-00	ELECT	10uF	20%	50V	
C763	1-126-163-11	ELECT	4.7uF	20%	50V	
C764	1-162-303-11	CERAMIC	0.0033uF	30.00%	16V	
C765	1-124-261-00	ELECT	10uF	20%	50V	
C767	1-124-261-00	ELECT	10uF	20%	50V	
		< CONNECTOR >				
CN701	1-784-733-11	CONNECTOR, FFC 11P				
CN702	1-785-334-11	PIN, CONNECTOR (LIGHT ANGLE)8P				
CN703	1-785-337-11	PIN, CONNECTOR(LIGHT ANGLE)11P				
CN704	1-785-333-11	PIN, CONNECTOR (LIGHT ANGLE)7P				
		< DIODE >				
D601	8-719-058-04	LED SEL5223S-TP15(I/⏻)				
D602	8-719-058-04	LED SEL5223S-TP15(TIMER SELECT)				
D603	8-719-058-64	LED SEL5823A-TP15(V-GROOVE)				
D604	8-719-058-64	LED SEL5823A-TP15(CHINEMA SPACE)				
D691	8-719-050-84	DIODE RB441Q-40T-72				
D755	8-719-911-19	DIODE 1SS133T-72				
D756	8-719-911-19	DIODE 1SS133T-72				
D761	8-719-911-19	DIODE 1SS133T-72				
D762	8-719-911-19	DIODE 1SS133T-72				
D763	8-719-911-19	DIODE 1SS133T-72				

Ref. No.	Part No.	Description				Remarks
		< FERRITE BEAD >				
FB701	1-412-473-21	INDUCTOR 0UH				
FB702	1-412-473-21	INDUCTOR 0UH				
		< FILTER >				
FL701	1-517-958-11	INDICATOR TUBE, FLUORESCENT				
		< IC >				
IC701	8-759-664-40	IC TMP88CS77AF-1A84				
IC702	8-749-011-05	IC GP1U28X(REMOTE SENSOR)				
IC703	8-759-663-65	IC M35501P				
IC704	8-759-083-77	IC BA3830F				
		< TRANSISTOR >				
Q601	8-729-900-80	TRANSISTOR BA1A4M-TP				
Q602	8-729-900-80	TRANSISTOR BA1A4M-TP				
Q603	8-729-900-80	TRANSISTOR BA1A4M-TP				
Q663	8-729-900-80	TRANSISTOR BA1A4M-TP				
Q664	8-729-900-80	TRANSISTOR BA1A4M-TP				
Q665	8-729-900-80	TRANSISTOR BA1A4M-TP				
Q690	8-729-119-78	TRANSISTOR 2SC2785TP-HFE				
Q691	8-729-140-04	TRANSISTOR 2SB1116-TP-LK				
Q692	8-729-140-04	TRANSISTOR 2SB1116-TP-LK				
		< RESISTOR >				
R600	1-249-429-11	CARBON	10K	5%	1/4W	
R601	1-249-410-11	CARBON	270	5%	1/4W	F
R602	1-249-411-11	CARBON	330	5%	1/4W	
R603	1-249-413-11	CARBON	470	5%	1/4W	F
R604	1-249-414-11	CARBON	560	5%	1/4W	F
R605	1-249-415-11	CARBON	680	5%	1/4W	F
R606	1-249-417-11	CARBON	1K	5%	1/4W	F
R607	1-249-418-11	CARBON	1.2K	5%	1/4W	F
R620	1-249-429-11	CARBON	10K	5%	1/4W	
R621	1-249-410-11	CARBON	270	5%	1/4W	F
R622	1-249-411-11	CARBON	330	5%	1/4W	
R623	1-249-413-11	CARBON	470	5%	1/4W	F
R624	1-249-414-11	CARBON	560	5%	1/4W	F
R625	1-249-415-11	CARBON	680	5%	1/4W	F
R626	1-249-417-11	CARBON	1K	5%	1/4W	F
R627	1-249-418-11	CARBON	1.2K	5%	1/4W	F
R640	1-249-429-11	CARBON	10K	5%	1/4W	
R655	1-249-429-11	CARBON	10K	5%	1/4W	
R656	1-249-429-11	CARBON	10K	5%	1/4W	
R671	1-249-414-11	CARBON	560	5%	1/4W	F
R672	1-249-414-11	CARBON	560	5%	1/4W	F
R673	1-249-409-11	CARBON	220	5%	1/4W	F
R674	1-249-409-11	CARBON	220	5%	1/4W	F
R693	1-249-437-11	CARBON	47K	5%	1/4W	
R695	1-249-417-11	CARBON	1K	5%	1/4W	F
R696	1-249-437-11	CARBON	47K	5%	1/4W	
R697	1-249-437-11	CARBON	47K	5%	1/4W	
R698	1-249-417-11	CARBON	1K	5%	1/4W	F
R701	1-247-903-00	CARBON	1M	5%	1/4W	
R702	1-249-401-11	CARBON	47	5%	1/4W	F
R703	1-249-401-11	CARBON	47	5%	1/4W	F
R704	1-249-429-11	CARBON	10K	5%	1/4W	
R705	1-249-429-11	CARBON	10K	5%	1/4W	
R706	1-249-429-11	CARBON	10K	5%	1/4W	

PANEL **SENSOR** **SENSOR 2** **SUB PANEL**

Ref. No.	Part No.	Description			Remarks
R707	1-249-429-11	CARBON	10K	5%	1/4W
R708	1-249-429-11	CARBON	10K	5%	1/4W
R709	1-249-429-11	CARBON	10K	5%	1/4W
R710	1-249-429-11	CARBON	10K	5%	1/4W
R711	1-247-807-31	CARBON	100	5%	1/4W
R712	1-247-807-31	CARBON	100	5%	1/4W
R713	1-249-441-11	CARBON	100K	5%	1/4W
R714	1-249-441-11	CARBON	100K	5%	1/4W
R715	1-249-441-11	CARBON	100K	5%	1/4W
R716	1-249-441-11	CARBON	100K	5%	1/4W
R717	1-249-441-11	CARBON	100K	5%	1/4W
R718	1-249-441-11	CARBON	100K	5%	1/4W
R719	1-249-441-11	CARBON	100K	5%	1/4W
R720	1-249-441-11	CARBON	100K	5%	1/4W
R721	1-249-441-11	CARBON	100K	5%	1/4W
R722	1-249-441-11	CARBON	100K	5%	1/4W
R723	1-249-441-11	CARBON	100K	5%	1/4W
R724	1-249-441-11	CARBON	100K	5%	1/4W
R725	1-249-441-11	CARBON	100K	5%	1/4W
R726	1-249-441-11	CARBON	100K	5%	1/4W
R727	1-249-441-11	CARBON	100K	5%	1/4W
R728	1-249-441-11	CARBON	100K	5%	1/4W
R729	1-249-441-11	CARBON	100K	5%	1/4W
R730	1-249-441-11	CARBON	100K	5%	1/4W
R731	1-249-441-11	CARBON	100K	5%	1/4W
R732	1-249-441-11	CARBON	100K	5%	1/4W
R733	1-249-441-11	CARBON	100K	5%	1/4W
R734	1-249-429-11	CARBON	10K	5%	1/4W
R737	1-247-807-31	CARBON	100	5%	1/4W
R750	1-249-429-11	CARBON	10K	5%	1/4W
R755	1-249-417-11	CARBON	1K	5%	1/4W F
R757	1-247-807-31	CARBON	100	5%	1/4W
R758	1-247-807-31	CARBON	100	5%	1/4W
R759	1-247-807-31	CARBON	100	5%	1/4W
R762	1-249-435-11	CARBON	33K	5%	1/4W
R763	1-247-895-00	CARBON	470K	5%	1/4W
R764	1-247-893-11	CARBON	390K	5%	1/4W
R765	1-247-893-11	CARBON	390K	5%	1/4W
R766	1-249-441-11	CARBON	100K	5%	1/4W
R767	1-249-441-11	CARBON	100K	5%	1/4W
R771	1-249-433-11	CARBON	22K	5%	1/4W
R773	1-249-436-11	CARBON	39K	5%	1/4W
R774	1-249-420-11	CARBON	1.8K	5%	1/4W F
R801	1-249-437-11	CARBON	47K	5%	1/4W
R802	1-249-437-11	CARBON	47K	5%	1/4W
R803	1-249-437-11	CARBON	47K	5%	1/4W
R804	1-249-437-11	CARBON	47K	5%	1/4W
R805	1-249-437-11	CARBON	47K	5%	1/4W
R806	1-249-437-11	CARBON	47K	5%	1/4W
R807	1-249-437-11	CARBON	47K	5%	1/4W
R808	1-249-437-11	CARBON	47K	5%	1/4W
R809	1-249-437-11	CARBON	47K	5%	1/4W
R810	1-249-437-11	CARBON	47K	5%	1/4W
R811	1-249-437-11	CARBON	47K	5%	1/4W
R812	1-249-437-11	CARBON	47K	5%	1/4W
R813	1-249-437-11	CARBON	47K	5%	1/4W
R814	1-249-437-11	CARBON	47K	5%	1/4W
R815	1-249-437-11	CARBON	47K	5%	1/4W
R816	1-249-437-11	CARBON	47K	5%	1/4W
R817	1-249-437-11	CARBON	47K	5%	1/4W

Ref. No.	Part No.	Description	Remarks
		< SWITCH >	
S601	1-762-875-21	SWITCH, KEYBOARD(I/⏻)	
S602	1-762-875-21	SWITCH, KEYBOARD(DISPLAY)	
S603	1-762-875-21	SWITCH, KEYBOARD(FUNCTION)	
S622	1-762-875-21	SWITCH, KEYBOARD(CHINEMA SPACE)	
S623	1-762-875-21	SWITCH, KEYBOARD(V-GROOVE)	
S624	1-762-875-21	SWITCH, KEYBOARD(MODE SELECT)	
		< VIBRATOR >	
X701	1-781-312-11	VIBRATOR, CERAMIC(12.5MHz)	
**********			
	1-671-504-11	SENSOR BOARD	
		**********	
		< CONNECTOR >	
CN708	1-506-481-11	PIN, CONNECTOR 2P	
		< DIODE >	
D704	8-719-055-84	DIODE GL528VS1(DISC IN DET.)	
		< RESISTOR >	
R711	1-249-415-11	CARBON 680 5% 1/4W F	
**********			
	1-671-789-11	SENSOR 2 BOARD	
		**********	
	4-964-461-02	HOLDER (SENSOR)	
		< TRANSISTOR >	
Q703	8-729-926-31	PHOTO TRANISTOR PT483F1(DISC IN DET.)	
**********			
	A-4428-658-A	SUB PANEL BOARD, COMPLETE	
		**********	
		< CAPACITOR >	
C771	1-162-306-11	CERAMIC 0.01uF 30.00% 16V	
C772	1-162-306-11	CERAMIC 0.01uF 30.00% 16V	
		< LED >	
D605	8-719-058-64	LED SEL5823A-TP15(SET UP)	
D606	8-719-058-64	LED SEL5823A-TP15(SOUND MODE)	
D607	8-719-058-64	LED SEL5823A-TP15(GROOVE EX)	
D608	8-719-058-64	LED SEL5823A-TP15(GROOVE)	
D609	8-719-058-03	LED SEL5423E-TP15(TAPE B ▷)	
D610	8-719-058-03	LED SEL5423E-TP15(TAPE B ◁)	
D611	8-719-058-03	LED SEL5423E-TP15(TAPE A ▷)	
D612	8-719-058-03	LED SEL5423E-TP15(TAPE A ◁)	
D613	8-719-058-04	LED SEL5223S-TP15(REC PAUSE/START)	
D652	8-719-056-13	LED SML79423C-TP15(CD)	
		< TERMINAL >	
* EPT701	1-537-738-21	TERMINAL, EARTH	
		< TRANSISTOR >	
Q605	8-729-900-80	TRANSISTOR BA1A4M-TP	
Q607	8-729-900-80	TRANSISTOR BA1A4M-TP	

Ref. No.	Part No.	Description				Remarks
Q609	8-729-900-80	TRANSISTOR BA1A4M-TP				
Q611	8-729-900-80	TRANSISTOR BA1A4M-TP				
Q613	8-729-900-80	TRANSISTOR BA1A4M-TP				
Q652	8-729-900-80	TRANSISTOR BA1A4M-TP				
		< RESISTOR >				
R608	1-249-420-11	CARBON	1.8K	5%	1/4W F	
R609	1-249-422-11	CARBON	2.7K	5%	1/4W F	
R610	1-247-843-11	CARBON	3.3K	5%	1/4W	
R611	1-249-425-11	CARBON	4.7K	5%	1/4W F	
R612	1-249-427-11	CARBON	6.8K	5%	1/4W F	
R613	1-249-429-11	CARBON	10K	5%	1/4W	
R614	1-249-431-11	CARBON	15K	5%	1/4W	
R615	1-249-434-11	CARBON	27K	5%	1/4W	
R641	1-249-410-11	CARBON	270	5%	1/4W F	
R642	1-249-411-11	CARBON	330	5%	1/4W	
R643	1-249-413-11	CARBON	470	5%	1/4W F	
R644	1-249-414-11	CARBON	560	5%	1/4W F	
R645	1-249-415-11	CARBON	680	5%	1/4W F	
R646	1-249-417-11	CARBON	1K	5%	1/4W F	
R647	1-249-418-11	CARBON	1.2K	5%	1/4W F	
R648	1-249-420-11	CARBON	1.8K	5%	1/4W F	
R649	1-249-422-11	CARBON	2.7K	5%	1/4W F	
R650	1-247-843-11	CARBON	3.3K	5%	1/4W	
R651	1-249-425-11	CARBON	4.7K	5%	1/4W F	
R652	1-249-427-11	CARBON	6.8K	5%	1/4W F	
R675	1-249-409-11	CARBON	220	5%	1/4W F	
R676	1-249-409-11	CARBON	220	5%	1/4W F	
R677	1-249-409-11	CARBON	220	5%	1/4W F	
R678	1-249-409-11	CARBON	220	5%	1/4W F	
R679	1-249-409-11	CARBON	220	5%	1/4W F	
R680	1-249-409-11	CARBON	220	5%	1/4W F	
R681	1-249-409-11	CARBON	220	5%	1/4W F	
R682	1-249-409-11	CARBON	220	5%	1/4W F	
R683	1-249-409-11	CARBON	220	5%	1/4W F	
R691	1-249-409-11	CARBON	220	5%	1/4W F	
R692	1-249-409-11	CARBON	220	5%	1/4W F	
R752	1-249-401-11	CARBON	47	5%	1/4W F	
R753	1-247-807-31	CARBON	100	5%	1/4W	
R754	1-247-807-31	CARBON	100	5%	1/4W	
		< SWITCH >				
S607	1-762-875-21	SWITCH, KEYBOARD(HI-DUB)				
S608	1-762-875-21	SWITCH, KEYBOARD(REC PAUSE/START)				
S609	1-762-875-21	SWITCH, KEYBOARD(CD SYNC)				
S611	1-762-875-21	SWITCH, KEYBOARD(GROOVE EX)				
S612	1-762-875-21	SWITCH, KEYBOARD(GROOVE)				
S641	1-762-875-21	SWITCH, KEYBOARD(TAPE A ▷)				
S642	1-762-875-21	SWITCH, KEYBOARD(TAPE A ◁)				
S643	1-762-875-21	SWITCH, KEYBOARD(TAPE B ▷)				
S644	1-762-875-21	SWITCH, KEYBOARD(TAPE B ◁)				
S645	1-762-875-21	SWITCH, KEYBOARD(■)				
S646	1-762-875-21	SWITCH, KEYBOARD(►II)				
S647	1-762-875-21	SWITCH, KEYBOARD(TUNER/BAND)				
S649	1-762-875-21	SWITCH, KEYBOARD(►►)				
S650	1-762-875-21	SWITCH, KEYBOARD(◄◄)				
S651	1-762-875-21	SWITCH, KEYBOARD(►►I)				

Ref. No.	Part No.	Description				Remarks
S652	1-762-875-21	SWITCH, KEYBOARD(I◄◄)				
S701	1-772-502-11	CONTROLLER, JOY STICK(ENTER)				
S751	1-473-392-11	ENCODER, ROTARY(VOLUME)				
**********						
	1-676-976-11	SUB TRANS BOARD				
		**********				
		< CAPACITOR >				
⚠C901	1-113-925-11	CERAMIC	0.01uF	20.00%	250V	
C902	1-126-768-11	ELECT	2200uF	20.00%	16V	
C903	1-126-933-11	ELECT	100uF	20.00%	16V	
		< CONNECTOR >				
CN901	1-564-321-00	PIN, CONNECTOR 2P				
* CN902	1-564-321-21	PIN, CONNECTOR 2P				
CN903	1-785-330-11	PIN, CONNECTOR (LIGHT ANGLE)4P				
		< DIODE >				
D901	8-719-024-99	DIODE 11ES2-NTA2B				
D902	8-719-024-99	DIODE 11ES2-NTA2B				
D903	8-719-024-99	DIODE 11ES2-NTA2B				
D904	8-719-024-99	DIODE 11ES2-NTA2B				
D906	8-719-911-19	DIODE 1SS133T-72				
		< IC >				
IC901	8-759-158-62	IC TA78057S				
		< TRANSISTOR >				
Q901	8-729-119-78	TRANSISTOR 2SC2785TP-HFE				
		< RESISTOR >				
R901	1-249-429-11	CARBON	10K	5%	1/4W	
R902	1-249-441-11	CARBON	100K	5%	1/4W	
		< RELAY >				
⚠RY901	1-755-276-11	RELAY, POWER				
		< TRANSFORMER >				
⚠T902	1-435-210-11	TRANSFORMER, POWER(EXCEPT US,CND)				
⚠T902	1-435-209-11	TRANSFORMER, POWER(US,CND)				
**********						
	1-676-975-11	TRANS BOARD				
		**********				
	1-533-293-	FUSE HOLDER				
		< CONNECTOR >				
* CN913	1-564-522-11	PLUG, CONNECTOR 7P				
* CN914	1-564-517-11	PLUG, CONNECTOR 2P				
		< FUSE >				
⚠F911	1-533-311-11	FUSE, GLASS CYLINDRICAL(DIA.5) 8A/125V				(US)
⚠F914	1-533-312-11	FUSE, GLASS CYLINDRICAL(DIA.5) 10A/125V				(US,CND)

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

TRANS

Ref. No.	Part No.	Description			Remarks
⚠F914	1-532-506-31	FUSE, CYLINDRICAL (TIME LUG) T6.3AL/250V			(EXCEPT US,CND)
⚠F915	1-533-312-11	FUSE, GLASS CYLINDRICAL(DIA.5) 10A/125V			(US,CND)
⚠F915	1-532-506-31	FUSE, CYLINDRICAL (TIME LUG) T6.3AL/250V			(EXCEPT US,CND)
		< RESISTOR >			
⚠R911	1-219-121-11	FUSIBLE	0.22	5%	1/4W (CND)
⚠R911	1-219-122-91	FUSIBLE	0.33	5%	1/4W (EXCEPT US,CND)
⚠R911	1-219-119-81	FUSIBLE	0.1	5%	1/4W (US)
⚠R912	1-219-121-11	FUSIBLE	0.22	5%	1/4W (CND)
⚠R912	1-219-122-91	FUSIBLE	0.33	5%	1/4W (EXCEPT US,CND)
⚠R912	1-219-119-81	FUSIBLE	0.1	5%	1/4W (US)
⚠R913	1-219-119-81	FUSIBLE	0.1	5%	1/4W
⚠R916	1-202-725-00	SOLID	3.3M	10%	1/2W (US,CND)
⚠R917	1-219-123-11	FUSIBLE	0.47	5%	1/4W
		< TRANSFORMER >			
⚠T901	1-435-387-11	TRANSFORMER, POWER(US)			
⚠T901	1-435-388-11	TRANSFORMER, POWER(CND)			
⚠T901	1-435-389-11	TRANSFORMER, POWER(AEP,G,AED,UK,CIS)			

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Ref. No.	Part No.	Description	Remarks
		MISCELLANEOUS	
		**********	
3	1-693-486-11	TUNER (FM/AM)(US,CND)	
3	1-693-490-11	TUNER (FM/AM)(EXCEPT US,CND)	
4	1-769-980-11	WIRE (FLAT TYPE) (13 CORE)(US,CND)	
4	1-773-013-11	WIRE (FLAT TYPE) (15 CORE)	(EXCEPT US,CND)
64	1-769-938-11	WIRE (FLAT TYPE) (11 CORE)	
102	1-792-794-11	WIRE (FLAT TYPE) (19 CORE)	
103	1-773-041-11	WIRE (FLAT TYPE) (17 CORE)	
104	1-773-045-11	WIRE (FLAT TYPE) (17 CORE)	
105	1-773-022-11	WIRE (FLAT TYPE) (15 CORE)	
⚠110	1-690-609-21	CORD, POWER(CND)	
⚠110	1-777-070-11	CORD, POWER(CND)	
⚠110	1-777-071-51	CORD, POWER(EXCEPT US,CND)	
⚠110	1-783-531-11	CORD, POWER(US)	
⚠112	1-770-019-11	ADAPTOR, CONVERSION PLUG 3P(UK)	
176	1-471-061-11	MAGNET ASSY	
⚠251	8-820-116-01	OPICAL PICK-UP BLOCK KSM-213DAP/Z-NP	
252	1-792-024-11	WIRE (FLAT TYPE) (16 CORE)	
M1	X-3378-241-1	MOTOR ASSY	
M941	1-763-072-11	FAN, DC	
S707	1-418-045-01	ENCODER, ROTARY(ELEVATOT UP/DOWN)	

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HARDWARE LIST
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#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S
#2	7-685-871-01	SCREW +BVTT 3X6 (S)
#3	7-685-872-09	SCREW +BVTT 3X8 (S)
#4	7-685-881-09	SCREW +BVTT 4X8 (S)
#5	7-685-650-79	SCREW +BVTP 3X16 TYPE2 N-S
#6	7-628-254-05	SCREW +PS 2.6X5

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

9-929-243-11

Sony Corporation
Audio Entertainment Group

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SS-VZ50MD/ZX10/ZX30AV/ZX50MD/ZX70DVD

SERVICE MANUAL

Photo: SS-ZX10

US Model
SS-ZX10/ZX50MD/ZX70DVD

Canadian Model
SS-ZX10/ZX30AV/ZX70DVD

AEP Model
UK Model
SS-ZX10/ZX30AV/ZX50MD/ZX70DVD

E Model
SS-VZ50MD/ZX50MD

Australian Model
SS-ZX30AV/ZX50MD

Tourist Model
SS-VZ50MD

This set is the speaker system in MHC-ZX10/ZX30AV/ZX70DVD, DHC-VZ50MD/ZX50MD.

SPECIFICATIONS

Speaker system	3-way, bass-reflex type, magnetically shielded type
Speaker units	
Woofer:	17 cm, cone type
Tweeter:	5 cm, cone type
Super Tweeter:	4 cm, cone type
Nominal impedance	8 ohms
Dimensions (w/h/d)	Approx. 250 x 375 x 285 mm
Mass	Approx. 5.5 kg net per speaker

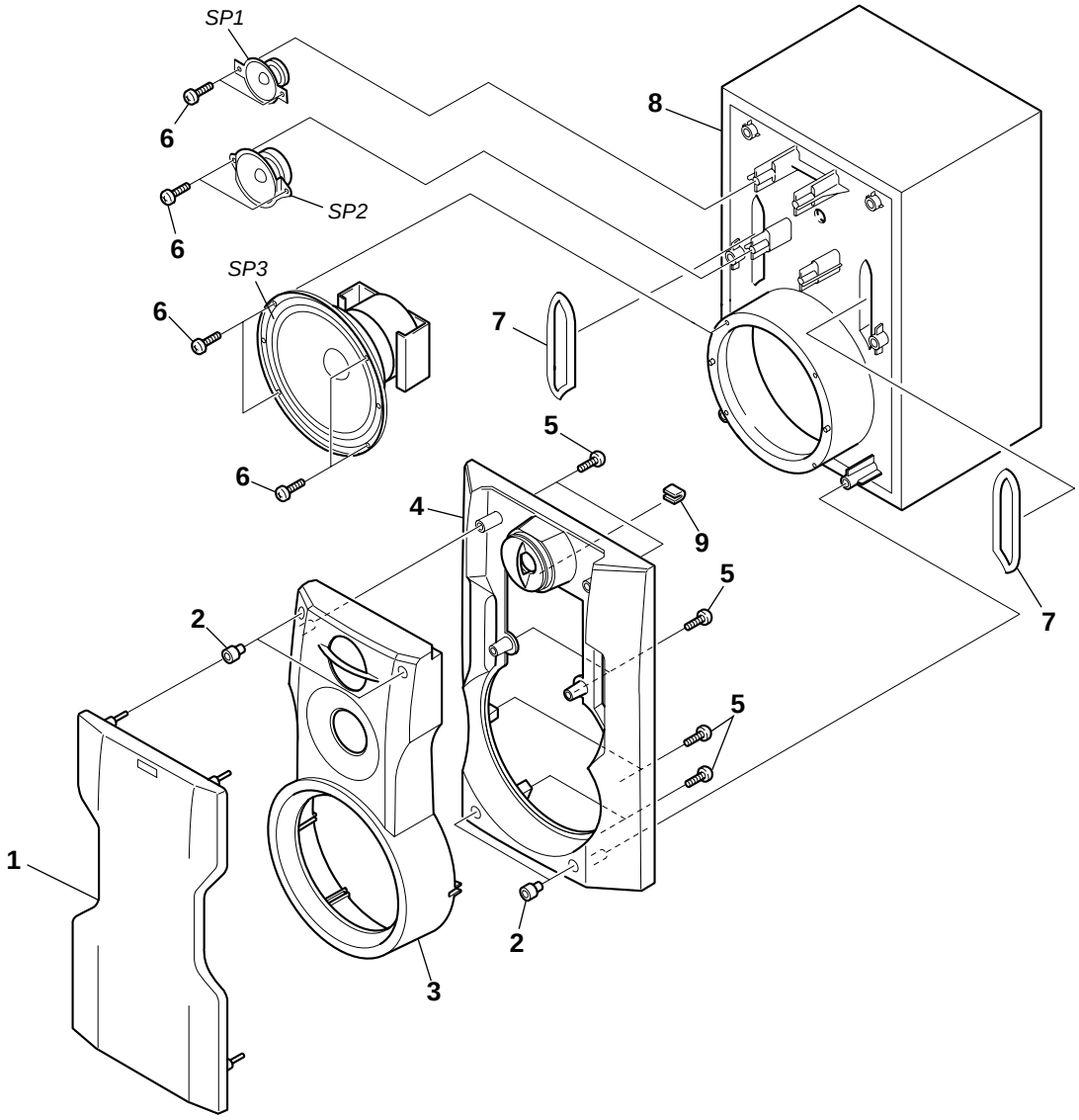
SPEAKER SYSTEM

SONY

EXPLODED VIEW AND PARTS LIST

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Abbreviation
  G : German model
  AED : North European model



Ref. No.	Part No.	Description	Remark
1	A-4412-073-A	FRAME ASSY, GRILLE	
2	4-963-075-01	CATCH	
3	4-227-595-01	PANEL, ORNAMENTAL	
4	4-227-594-01	PANEL, FRONT	
5	7-685-162-01	SCREW +B 4X14, TAPPING	
6	4-874-614-01	SCREW (4) (3.5X14), TAPPING	
7	4-227-663-01	PACKING	
8	A-4412-154-A	CABINET ASSY, SPEAKER	
9	4-229-552-01	PACKING (TW)	
SP1	1-529-663-11	SPEAKER (4cm)	
SP2	1-529-665-11	SPEAKER (5cm)	
SP3	1-529-664-11	SPEAKER (ZX10,ZX50MD)	
SP3	1-529-668-11	SPEAKER (VZ50MD,ZX30AV,ZX70DVD)	

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ACCESSORIES & PACKING MATERIALS
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	1-558-848-11	CORD, SPEAKER	